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POLLUTION OF THE INTERSTATE WATERS OF THE CHATTAHOOCHEE RIVER AND ITS TRIBUTARIES, GEORGIA-ALABAMA. PROCEEDINGS OF CONFERENCE, SESSION (2ND) HELD AT ATLANTA, GEORGIA ON FEBRUARY 17, 1970

Federal Water Pollution Control Administration
Washington, D.C.

17 February 1970

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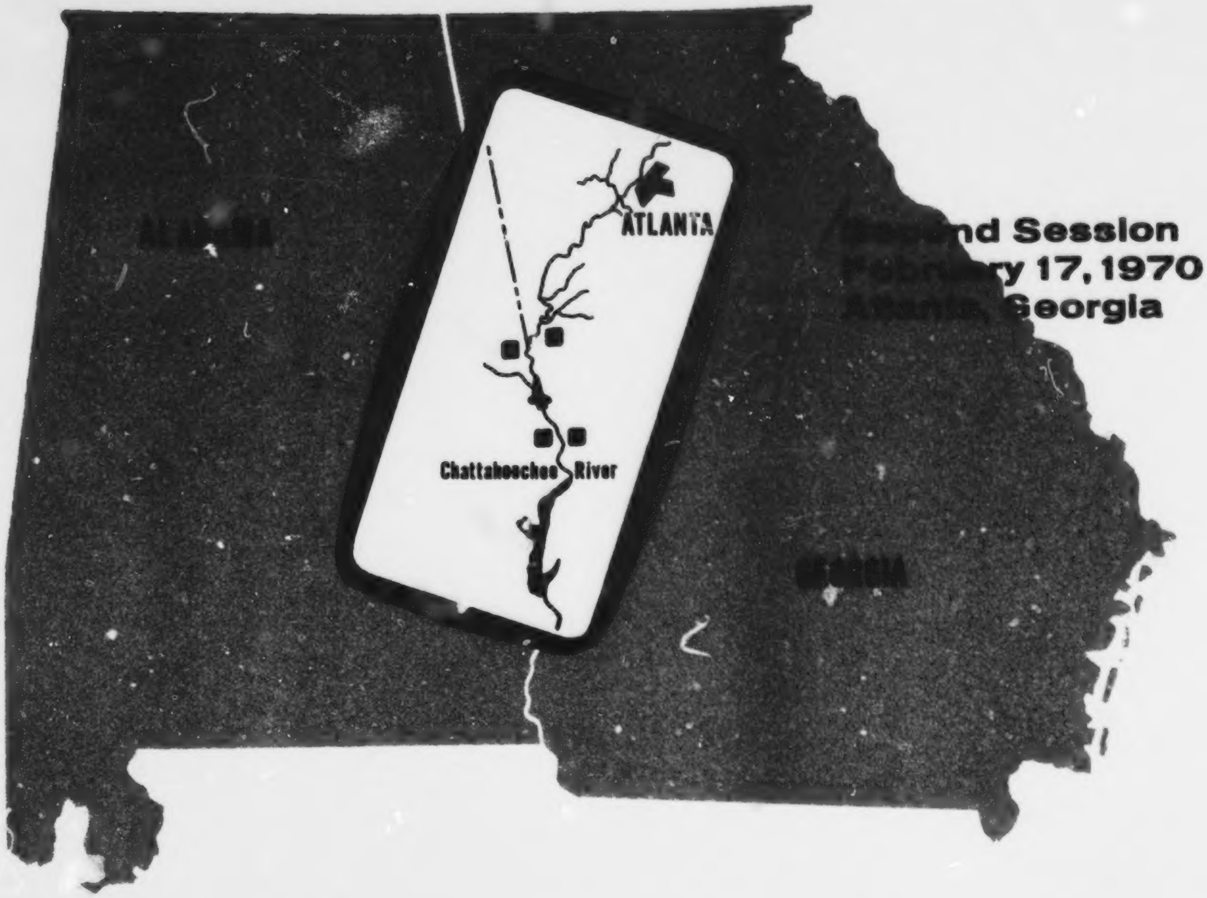
PROCEEDINGS


ALABAMA
ATLANTA
Chattahoochee River
GEORGIA

Second Session
February 17, 1970
Atlanta, Georgia

Conference

In the matter of Pollution of the Interstate Waters of the Chattahoochee River and its Tributaries – Georgia – Alabama

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UNITED STATES
DEPARTMENT OF THE INTERIOR
Federal Water Pollution
Control Administration

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SECOND SESSION OF THE CONFERENCE IN THE MATTER OF POLLUTION OF THE CHATTAHOOCHEE RIVER AND ITS TRIBUTARIES IN THE STATES OF GEORGIA AND ALABAMA

Civic Center
Atlanta, Georgia

Tuesday, February 17, 1970

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This report is on the

Second Session of the Conference in the Matter of Pollution of the Chattahoochee River and its Tributaries in the States of Georgia and Alabama, held at the Civic Center, 395 Piedmont Avenue, N. E., Atlanta, Georgia, on Tuesday, February 17, 1970, at 9:40 a. m.

It includes statements, discussions, and recommendations on water uses, Chattahoochee River; summary of loadings, streamflow, water intakes, samplings, and related information.

PRESIDING:

Mr. Murray Stein, Assistant Commissioner for Enforcement, Federal Water Pollution Control Administration, United States Department of the Interior, Washington, D. C.

CONFEREES:

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Mr. R. S. Howard, Jr., Executive Secretary, Georgia Water Quality Control Board, 47 Trinity Avenue, Atlanta, Georgia

Mr. Arthur N. Beck, Technical Secretary, Alabama Water Improvement Commission, State Office Building, Montgomery, Alabama

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PROCEEDINGS

OPENING STATEMENT

OF

MURRAY STEIN

MR. STEIN: The conference is open.

This second session of the conference in the matter of pollution of the Chattahoochee River and its tributaries in the States of Georgia and Alabama is being held under the provisions of Section 10 of the Federal Water Pollution Control Act, as amended. Under the provisions of the Act, the Secretary of the Interior is authorized to initiate a conference of this type when on the basis of reports, surveys, or studies he has reason to believe that pollution subject to abatement under the Federal Act is occurring.

The conference was first held on July 14-15, 1966, in Atlanta, Georgia.

As specified in Section 10 of the Act, the official State water pollution control agencies have been notified of this conference. These agencies are the Georgia Water Pollution Control Board and the Alabama Water Improvement Commission.

Opening Statement - Murray Stein

Both the State and Federal governments have responsibilities in dealing with water pollution control problems. The Federal Water Pollution Control Act declares that the States have primary rights and responsibilities for taking action to abate and control pollution. Consistent with this, we are charged by law to encourage the States in these activities.

At the same time, the Secretary of the Interior is charged by law with specific responsibilities in the field of water pollution control in connection with pollution of interstate and navigable waters. The Federal Water Pollution Control Act provides that pollution of interstate or navigable waters which endangers the health or welfare of any persons, shall be subject to abatement. This applies whether the matter causing or contributing to the pollution is discharged directly into such waters or reaches such waters after discharge into a tributary.

The purpose of the conference is to bring together the State water pollution control agencies, representatives of the U. S. Department of the Interior, and other interested parties to review the existing situation, and the progress which has been made, to lay a basis for future action by all parties concerned, and to give the States, localities, and industries an opportunity to take any remedial action under State and local law.

The Georgia Water Quality Control Board will be represented by Mr. Rock Howard and the Alabama Water Improvement Commission will be represented by Mr. Arthur Beck.

The Federal conferee is Mr. John Thoman, Regional Director, Southeast Region, Federal Water Pollution Control Administration.

My name is Murray Stein. I am from headquarters of the Federal Water Pollution Control Administration in Washington, D. C., and the representative of Secretary Hickel.

The parties to this conference are the official State water pollution control agencies and the U. S. Department of the Interior. Participation in this conference will be open to representatives and invitees of these agencies and such persons as inform me that they wish to present statements.

At the first conference session, the conferees unanimously recommended a program for necessary action. The conclusions and recommendations of the conferees are as follows:

1. The Chattahoochee River is an interstate stream forming part of the border between Alabama and Georgia.

2. The Chattahoochee River between Atlanta, Georgia, and Fort Gaines, Georgia, is polluted due to discharges of wastes from municipalities, industries, and the discharge of oxygen-deficient waters from impoundments including hydro-

electric and navigation operations.

3. Water of high quality is required for many present and future uses of the Chattahoochee River, including public water supply; the propagation of fish, aquatic and wildlife; and recreation, including swimming, boating, fishing, and other water-contact activities.

4. For the most part, action taken to date by municipalities and industries has not been sufficient to control pollution of the Chattahoochee River.

5. The installation of adequate remedial facilities has been delayed because of the complex nature of the municipal and industrial waste treatment problems.

6. All municipalities and other discharging domestic wastes shall provide treatment sufficient to protect the above-enumerated water uses. This will mean the minimum installation of secondary treatment with adequate disinfection of the effluent where indicated. Industries shall install comparable remedial facilities for industrial waste discharges.

7. All necessary remedial facilities to control pollution of that portion of the Chattahoochee River covered by this conference shall be completed and in operation on or before July 1, 1971. The State water pollution control agencies of Alabama and Georgia shall require all those responsible for

water pollution within the area covered by the conference to submit, within 12 months, a time schedule including completion of plans and specifications, arranging of financing and awarding of contracts; to insure that the July 1, 1971, deadline is met.

8. The Alabama Water Improvement Commission and the Georgia Water Quality Control Board are to be commended for their effective and energetic programs, and it is recognized that these agencies will do everything possible to accelerate, where possible, the pollution abatement program described above.

9. Federal installations shall provide at least the same degree of treatment required of municipalities and industries and have such facilities in operation as soon as possible within the established time schedule.

10. Discharges from impoundments of that portion of the Chattahoochee River covered by this conference shall be such as to maintain water quality for the above enumerated water uses, including the provision of an adequate oxygen supply below such discharges.

As you can see, we are not waiting for that magic date of July 1, 1971, because if the schedule is not met by then it will be too late and the river will not be cleaned up.

We know the States have had an active program with the individual dischargers. Interim dates have been set, schedules have been formulated, and our purpose is to see what progress is being made toward meeting this July 1971 date, and to see if we have to take any further action if it appears that this date will not be met for the cleanup.

Now a word about the procedures governing the conduct of the conference. The conferees will be called upon to make statements. The conferees, in addition, may call upon participants whom they have invited to the conference to make statements. In addition, we shall call on other interested individuals who wish to present statements. At the conclusion of each statement, the conferees will be given an opportunity to comment or ask questions, and I may ask a question or two. This procedure has proven effective in the past in reaching equitable solutions.

I want to make this clear so that there will be no misunderstanding here. The parties to this conference are seated up at this table. We carry out our business in a public manner. The rest of the people here are invitees. We will give everyone an opportunity to have his full say. However, in order to carry on an orderly proceeding, we do not permit questions or comments from the floor, because if we did we would be here for a very long time. Hold your questions or comments and when you come up to make your statement you can ask them all, or make any comments that you want to make.

Opening Statement - Murray Stein

Everyone will be given a full opportunity to present anything that is relevant for the consideration of the conferees.

At the end of all the statements, we shall have a discussion among the conferees and try to arrive at a basis of agreement on the facts of the situation. Then we shall go into an executive session, following which we will make a statement for the conferees on the results of this executive session.

A record and verbatim transcript of the conference is being made by Mr. Al Zimmer. This is being made for the purpose of aiding us in preparing a summary, and also for providing a a complete record of what is said here. It usually takes about three or four months for the transcript to come out in printed form. If you wish a record beforehand, you can check with the stenographic reporter, who is an independent contractor, and make your own arrangements with him. I should like to indicate that we are not printing in color. So take into account that any charts you may present will be done in black and white. Try not to refer to color if you use graphic aids in your presentation as they will be meaningless in the reading of the transcript.

We shall make copies of the summary and transcript available to the official State water pollution control agencies.

We have generally found that for the purpose of maintaining relationships within the States the people who wish summaries and transcripts should request them through their State agency rather than come directly to the Federal Government. The reason for this is that, when the conference has been concluded, we would prefer people who are interested in the problem to follow the normal relations in dealing with the State agencies rather than the Federal Government. This has worked successfully in the past and we will be most happy to make this material available for distribution.

I would like to suggest that all speakers and participants other than the conferees making statements come to the lectern and identify themselves for purposes of the record.

I would now like to call on the Federal conferee for the Federal presentation, Mr. John Thoman.

Mr. Thoman.

STATEMENT OF

MR. JOHN R. THOMAN

CONFEREE AND REGIONAL DIRECTOR, SOUTHEAST REGION, FEDERAL WATER POLLUTION CONTROL ADMINISTRATION, UNITED STATES DEPARTMENT OF THE INTERIOR, ATLANTA, GEORGIA

MR. THOMAN: Thank you, Mr. Stein.

In the interest of brevity, we will move right along to the statement by the Federal Government, the Federal Water Pollution Control Administration. This will be presented by Mr. Paul Traina, the Director of Technical Programs at our Southeast Water Laboratory Technical Services Program in Athens, Georgia.

STATEMENT OF

MR. PAUL TRAINA

DIRECTOR, TECHNICAL SERVICES PROGRAM,
SOUTHEAST WATER LABORATORY, FEDERAL
WATER POLLUTION CONTROL ADMINISTRATION,
UNITED STATES DEPARTMENT OF THE INTERIOR,
ATHENS, GEORGIA

MR. TRAINA: Thank you, Mr. Thoman.

Mr. Chairman and Conferees:

My name is Paul Traina. I am Director of the Technical Training Program, Federal Water Pollution Control Administration, Southeast Region.

I. INTRODUCTION

The first session of the Federal-State enforcement conference on pollution of the Chattahoochee River held in July

1966 considered the effects of existing municipal and industrial waste sources on the interstate waters of the river and made recommendations concerning their abatement. The recommendations of this first session were:

1. The Chattahoochee River is an interstate stream forming part of the border between Alabama and Georgia.

2. The Chattahoochee River between Atlanta, Georgia, and Fort Gaines, Georgia, is polluted due to discharges of wastes from municipalities, industries and the discharge of oxygen-deficient waters from impoundments including hydroelectric and navigation operations.

3. Water of high quality is required for many present and future uses of the Chattahoochee River, including public water supply; the propagation of fish, aquatic and wild life; recreation, including swimming, boating, fishing and other water-contact activities.

4. For the most part, action taken by municipalities and industries to date has not been sufficient to control pollution of the Chattahoochee River.

5. The installation of adequate remedial facilities has been delayed because of the complex nature of the municipal and industrial waste treatment problems.

6. All municipalities and others discharing domestic wastes shall provide treatment sufficient to protect

the above enumerated water uses. This will mean the minimum installation of secondary treatment with adequate disinfection of the effluent where indicated. Industries shall install comparable remedial facilities for industrial waste discharges.

7. All necessary remedial facilities to control pollution of that portion of the Chattahoochee River covered by this conference shall be completed and in operation on or before July 1, 1971. The State water pollution control agencies of Alabama and Georgia shall require all those responsible for water pollution within the area covered by the conference to submit within 12 months a time schedule including completion of plans and specifications, arranging of financing and awarding of contracts, to insure that the July 1, 1971, deadline is met.

8. The Alabama Water Improvement Commission and the Georgia Water Quality Control Board are to be commended for their effective and energetic programs, and it is recognized that these agencies will do everything possible to accelerate where possible the pollution abatement program described above.

9. Federal installations shall provide at least the same degree of treatment required of municipalities and industries and have such facilities in operation as soon as possible within the established time schedules.

10. Discharges from impoundments of that portion

of the Chattahoochee River covered by this conference shall be such as to maintain water quality for the above enumerated water uses, including the provision of an adequate oxygen supply below such discharges.

These recommendations recognize that there is a serious water quality problem in the Chattahoochee River conference area which requires specific immediate abatement measures. Progress toward implementation of these specific immediate abatement measures will be reported by the Georgia Water Quality Control Board and the Alabama Water Improvement Commission.

Because of increasing population and industrial development in the basin, water quality problems will continue to be critical in the foreseeable future. Other factors need to be considered in a total plan for the preservation and protection of water quality in the Chattahoochee River Basin, particularly to meet these future demands. This statement will discuss some of these factors.

II. POPULATION

The Atlanta metropolitan area is the largest population center in the basin and is located near the headwaters of the Chattahoochee River (Figure 1). The 1967 population of metropolitan Atlanta, including Fulton, Cobb, DeKalb, Clayton and Gwinnett Counties and parts of contiguous areas, was 1,335,750.(1) This is projected to increase to 2,443,000 by 1988 and to 4,872,000 by 2020; respective increases of 83 percent and 265 percent from the 1967 figures. Population in the Chattahoochee and its major tributary basins from Atlanta to Fort Gaines Dam below Columbus is expected to be close to 6,000,000 by the year 2020.(2)

III. WATER USES

Municipal and industrial water supply in the Atlanta metropolitan area averaged 134 million gallons per day (mgd) in 1966 and will increase to 293 mgd in 1988 and 621 mgd in 2020.(3) These increased water demands of 119 percent and 363 percent respectively over 1967 are in excess of projected population growth.

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(1) Atlanta Region Metropolitan Planning Commission

(2) U. S. Study Commission, Southeast River Basins, Appendix 7, 1963.

(3) Atl. Reg. Met. Plan. Comm., op. cit.

P. Traina

Lake Sidney Lanier impounded by Buford Dam on the Chattahoochee River upstream of Atlanta is a U. S. Army Corps of Engineers project constructed to provide flood control, recreation and hydroelectric power generation. Recreational usage is the largest of any Federal reservoir in the United States amounting to over 10 million visitor days in 1969. Downstream of the Buford Dam is the impoundment created by Morgan Falls Dam of the Georgia Power Company. In addition to use for generating 16,800 KW of hydroelectric power, operation of this facility partially regulates the unsteady sporadic discharges from Buford Dam to insure minimum regular low flows for the metropolitan area's water supply needs. The average weekly release from Buford Dam is 1,600 cfs. The minimum flow is about 750 cfs.

Immediately downstream of Atlanta, the Chattahoochee River is used primarily for waste disposal and as a source of cooling water for thermal electric power generation. The wastes from a population of over 827,750 drain to the Chattahoochee River in the Atlanta metropolitan area. By 1988, the river will be receiving the residual wastes from a population of 1,455,000 and by 2020, from 2,859,000. The other major tributaries which receive wastes from the metropolitan area are the South River and the Flint River. The population of each of these areas by 2020 will increase by about 260 percent for the South River and 600 percent for the Flint River to about 909,000 and 470,000 population respectively. The Yellow River will also become a major receiving water for waste disposal by 2020. Population tributary to the Yellow River will increase more than 10 times to 478,000 people.

The cooling water requirement of the Atkinson and McDonough generating plants of the Georgia Power Company is 1,276 cubic feet per second (cfs) at full load. This amount, equivalent to about 825 mgd, is in excess of the present minimum flows in the Chattahoochee River at the plant site. The plants are located approximately one mile downstream of the City of Atlanta Clayton sewage treatment plant. The used cooling water is returned to the river at elevated temperatures. Forty-two miles below the Clayton sewage treatment facility, the Yates steam electric plant utilizes 920 cfs (594 mgd) for cooling purposes.

Municipal and industrial water supply requirements in the West Point-Lanett area from the Chattahoochee River amount to about 1.1 mgd. The river at this point is also used for waste disposal. A dam is being constructed at West Point by the Corps of Engineers for flood control, hydropower and recreation.

Several small impoundments are located below West

Point, Georgia, and are used for hydroelectric power generation and water supply.

Municipal and industrial water supply and waste disposal are the major water uses in the Columbus-Phenix City area amounting to 18 mgd. The Walter George Reservoir immediately downstream of Columbus, Georgia, is used principally for navigation, hydroelectric power generation and recreation. There is also at least one significant treated industrial waste discharge to this impoundment as well as treated domestic waste from Fort Benning.

In addition to the existing water resource developments, planning proposals are under consideration to provide navigation to Atlanta by construction of new impoundments.

MR. HOWARD: Just a minute, Paul.

Mr. Chairman, I wish we could stick to this conference. We didn't cite the Georgia Power Company. We didn't go into any water resources projects.

I wish you would get on with the thing and cover the subjects of the original conference. All this stuff about the South River, the Flint River and all I don't think is germane to this meeting. It is a waste of our time.

MR. TRAINA: Mr. Howard, we are not commenting on the existing situation --

MR. HOWARD: I am talking to the Chairman about this. I want to say something about it because I think we ought to stick to it or we will never get through with this conference.

MR. STEIN: I think we should take what is relevant.

We are here to check on the schedule of the first conference. I am going to leave it to your judgment on what you think is relevant, Mr. Traina, and you may proceed, but I think the guidelines certainly should be what Mr. Howard has indicated. That is, we are here to consider the progress being made toward the remedial program which was set up at the first session.

MR. HOWARD: I talked to Mr. Thoman and others about this statement, and I thought it would be understood that we were going to stick to the subject of the reconvened conference and not go into water resources projects and things like that.

Now, we could start off and say a lot of stuff about that, and we will be here for weeks. We know we have problems in the Flint and South Rivers, but I don't see why you bring all this data and information and general statements in about other basins. We understood that was going to be left out.

MR. STEIN: Do you want to say anything, Mr. Thoman?

MR. THOMAN: Yes, I do.

Rock, I agree with you that the statement may not be germane precisely to the people that are putting pollution in the river at the present time. However, there is the need, and the people in the Atlanta metropolitan area recognize that future development is going to tremendously complicate the problems that exist here.

We have found in other enforcement conferences that the mechanism that is used can certainly be brought to bear on getting at least an awareness of the problems that are going to exist in the future.

I believe that is the purpose of this statement. It doesn't pertain specifically to the development of an action program now. However, I think in the recommendations it will indicate that certain things are necessary.

MR. STEIN: In the interests of moving along, I think the Chair will agree with Mr. Howard's statement on the purpose of the meeting, and I would leave it to your discretion, Mr. Traina, to put in anything that you would consider relevant. If you consider this relevant, just go ahead.

Would you continue, if you can, with that in mind?

MR. TRAINA: Since we are concerned about time here, let me go through and, if you will just give me a minute, I will pick out the parts that I think are germane to the problems that presently exist, and especially which would exist in the future.

We are discussing water quality problems, Mr. Chairman, that presently exist and will be impacted by some of the future developments that are going to occur in the area.

Now, may I continue?

Other benefits to this project would accrue from recreation use. The Chattahoochee River would be impounded essentially from the headwaters of the presently authorized West Point impoundment to Atlanta. This emphasizes the need to establish use priorities to prevent conflicts due to increasing future demands as well as the necessity to accelerate the existing waste abatement program.

In summary, the Chattahoochee River system and major tributaries, as well as contiguous basins, is used for municipal and industrial water supply, hydro and steam electric power generation, recreation, navigation and waste disposal. Some of these uses already conflict with others and the rapidly developing increased demands on the limited water resource, particularly in the Atlanta metropolitan area, will exacerbate these conflicts during the foreseeable future.

IV. WATER QUALITY PROBLEMS

At the present time, the Chattahoochee River in the Atlanta metropolitan area (from Peachtree Creek to Cedar Creek) is classified by the State of Georgia for industrial use. Downstream of Atlanta (from Cedar Creek to Franklin, Georgia), the river is classified for fishing. In the Flint River Basin (from the headwater to Georgia Highway 54), the classification is industrial use and from this point to Woolsey Road (S.R. 1061) the use classification is fishing.

The dissolved oxygen criteria for industrial use are a daily average of 3.0 mg/l and not less than 2.5 mg/l at any time. The dissolved oxygen criteria for fishing require a minimum of 4.0 mg/l at all times for waters supporting warm water species of fish. Even with the most efficiently constructed and operated conventional secondary treatment plants, the treated waste effluents to the receiving waters, at the present time, will contain enough residual organic demand such that the industrial use classification is the highest water quality that can be expected under regulated low flow conditions. Increasing population pressures will further affect this situation to the point where it will be impossible to meet the water quality standards by employing the usual methods of waste treatment.

Most of the existing sewer systems within the Atlanta metropolitan area are separate for sanitary and stormwater overflows. However, the sewerage systems tributary to the Clayton, South River and Intrenchment Creek sewage treatment plants receive stormwater drainage as well as sewage and industrial wastes. During periods of moderate rainfall, mixtures of raw sewage, industrial wastes and stormwater are bypassed and discharged to receiving streams. Water quality in the receiving streams is severely degraded during these periods. Peachtree Creek is little more than an open sewer during wet weather due to overflows of waste normally treated at the Clayton plant. The extent and magnitude of this problem have not been measured and a program of evaluation is necessary to develop a treatment and control system.

As previously discussed, there is a large usage of Chattahoochee River water at Atlanta for cooling purposes at Georgia Power Company's Atkinson and McDonough steam electric generating plants. This cooling water is discharged back to the Chattahoochee River at an elevated temperature. For every degree Fahrenheit increase in temperature in the receiving water, there is about a 2.6 percent increase in the rate of organic demand of waste material. Increased temperature causes a reduction in the amount of available dissolved oxygen; a more rapid utilization of this reduced dissolved oxygen; and, if discharged to an impoundment, may cause increased stratification, thereby reducing the volume available for waste assimilation. Thermal discharges are a major variable which affect water quality in the Atlanta metropolitan area and their impact should be fully evaluated such that adequate abatement and control measures may be recommended.

Construction of new impoundments on the Flint and

Chattahoochee watersheds immediately downstream of Atlanta will reduce the capacity of the rivers to assimilate residual organic wastes which are presently being discharged in these areas. This could have a direct effect on the economic viability of these impoundment projects since, if water quality is not sufficiently high to permit a recreational use, the benefits to be derived from this use cannot be realized. Combined with the reduced assimilative capacity and higher organic waste loads, the levels of nitrogen and phosphorus, which are nutrients for the growth of algae, discharged to the impoundments may induce accelerated eutrophication, further depressing recreation values.

While the overall quantity of water utilized is not changed by hydropower generation, the pattern of releases from Buford Dam is such that very small quantities of water are discharged during periods when demands for power are minimal, such as on weekends. Although these sporadic flow releases are somewhat modified by partial regulation at the downstream Morgan Falls Dam, for significant periods of time, under present conditions, water necessary for dilution of residual waste effluents is not available. Further regulation of releases and flow augmentation during low flow periods will be essential for maintenance of water quality standards to keep pace with future growth.

There will be an estimated 207,500 people, or 15.5

percent of the total population in sewered areas, not connected to sewerage and treatment systems in the Atlanta metropolitan area by 1973.(4) Under present estimates of population projection, this number will increase to 238,000 by 1988 and 280,000 by 2020. These waste discharges represent a significant source of pollution in the metropolitan area and affirm the necessity for a continually updated plan of sewerage and treatment plant construction to reduce or eliminate this obvious source of waste.

This effort is hampered, however, by the fact that waste collection and treatment in the metropolitan area is the responsibility of at least 23 political subdivisions. This uncoordinated haphazard duplication of services has made planning and implementation of an area-wide pollution control program needlessly difficult, if not impossible. Furthermore, the facilities that are constructed are generally inefficient, uneconomical and poorly operated with respect to the water quality problems of the entire region. Some form of area regulatory planning, control and operation of wastewater abatement is urgently required if water quality standards in the Atlanta metropolitan area are to be maintained in the face of rapidly increasing urban development.

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(4) Atlanta Region Comprehensive Plan: Water and Sewerage Engineering Recommendations, Atlanta Region Metropolitan Planning Commission, February 1969.

In addition to controlling wastewater abatement facilities, there is a need for coordination and planning of construction and operation of other developments affecting water quality, by Federal, State and local agencies bearing responsibility for allocating water resources in the Atlanta area (Figure 2).

V. CONCLUSION

The conclusion of our statements is as follows:

1. The Chattahoochee River, its major tributaries and contiguous river basins from the headwaters to Fort Gaines Dam are used extensively for a variety of water-oriented purposes. In some instances, these purposes have already conflicted, particularly in the Atlanta metropolitan area.

2. Increasing population and industrial development in the Chattahoochee River Basin will place greater demands on the water resources for water supply, power generation, recreation, navigation and waste disposal to the point where water quality will continue to be severely degraded even with the most efficiently constructed and operated conventional secondary

treatment plants.

3. In addition to secondary treatment for municipal and industrial waste sources in the area, as recommended by the Georgia Water Quality Control Board and the Alabama Water Improvement Commission, other technical alternatives such as flow augmentation, tertiary treatment, basin diversion of wastes, optimal waste input location, stormwater treatment and control as well as reuse of wastewater, will require consideration in the development of a comprehensive water quality management plan to meet future needs.

VI. RECOMMENDATIONS

1. Specific waste abatement recommendations made by the Georgia Water Quality Control Board and the Alabama Water Improvement Commission be implemented immediately. Progress reports be submitted by each waste discharger at six-month intervals.

2. A technical committee be established by the Federal Water Pollution Control Administration and the Georgia Water Quality Control Board to evaluate the technical alternatives in meeting water quality requirements for future demands in the Atlanta metropolitan area to be implemented by the appropriate State agencies. This technical committee to make an initial report to the conferees in nine months from the date of

the second session and progress reports annually thereafter.

3. A metropolitan sewer authority be established for the Atlanta area with statutory authority to determine rates as well as construct and operate wastewater treatment and collection facilities in accordance with a comprehensive plan to meet future needs.

Thank you.

MR. STEIN: Thank you.

The maps attached will appear in the record.

Figure 1

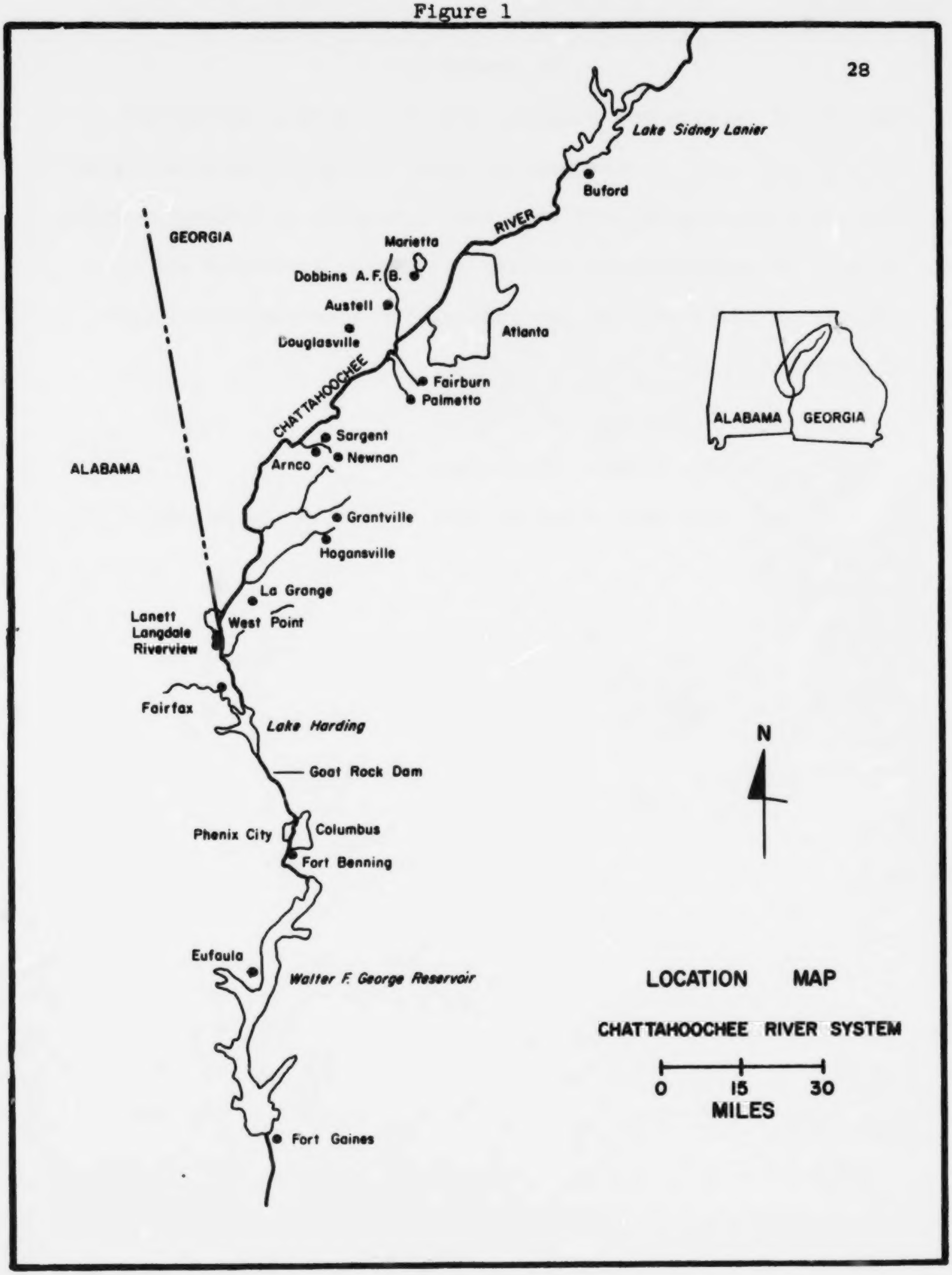
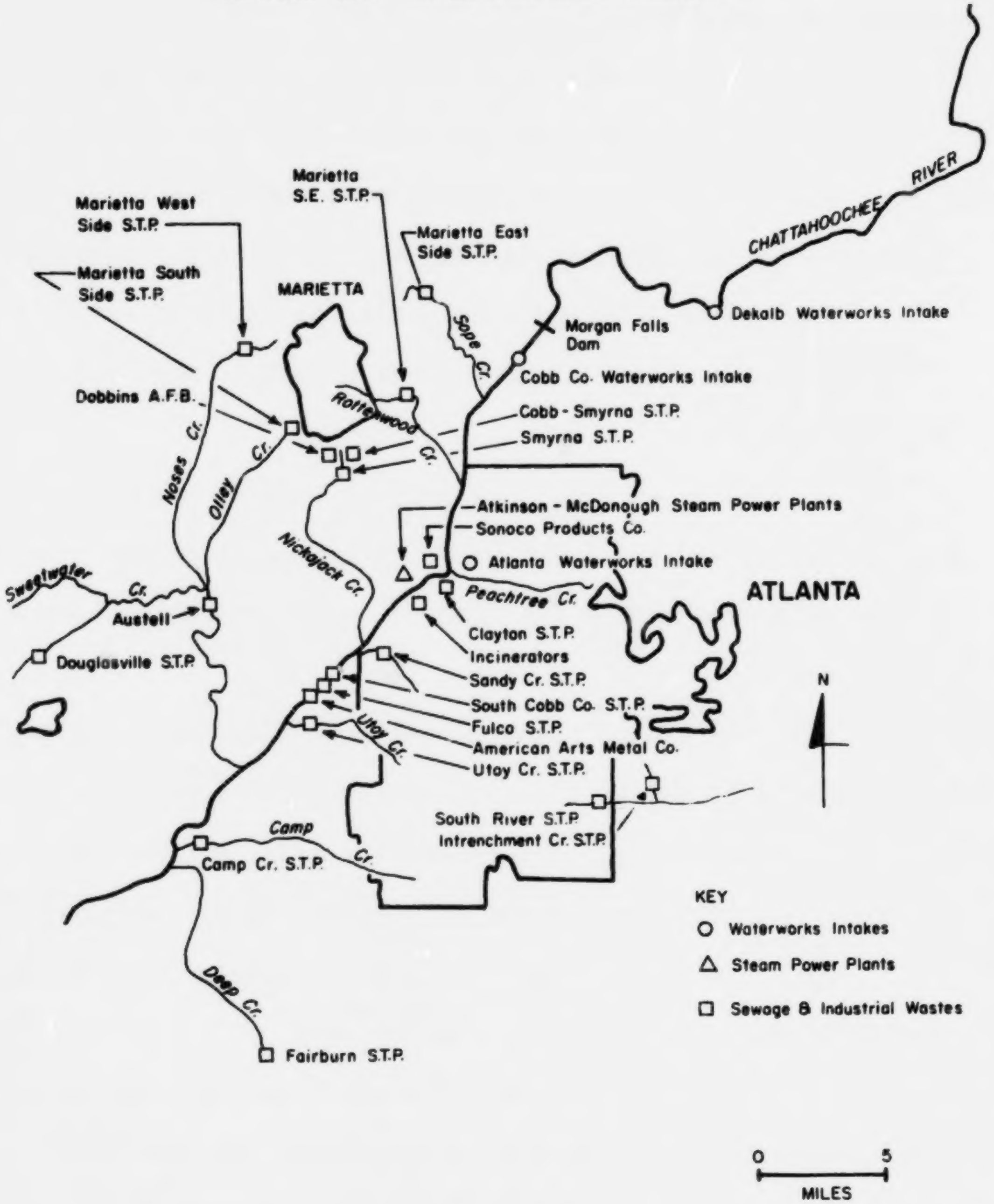

Lake Sidney Lanier
Buford
RIVER
GEORGIA
Marietta
Dobbins A.F.B.
Austell
Douglasville
Atlanta
CHATTAHOOCHEE
Fairburn
Palmetto
ALABAMA
GEORGIA
Sargent
Arnco
Newnan
ALABAMA
Grantville
Hogansville
La Grange
Lanett
Langdale
Riverview
West Point
Fairfax
Lake Harding
Goat Rock Dam
N
Phenix City
Columbus
Fort Benning
Eufaula
Walter F. George Reservoir
LOCATION MAP
CHATTAHOOCHEE RIVER SYSTEM
0
15
30
MILES
Fort Gaines

Figure 2

DETAIL MAP ATLANTA AND VICINITY


Marietta S.E. S.T.P.
Marietta West Side S.T.P.
Marietta East Side S.T.P.
Marietta South Side S.T.P.
MARIETTA
CHATTAHOOCHEE RIVER
Dekalb Waterworks Intake
Morgan Falls Dam
Sope Cr.
Cobb Co. Waterworks Intake
Dobbins A.F.B.
Rottenwood Cr.
Cobb-Smyrna S.T.P.
Smyrna S.T.P.
Noses Cr.
Olley Cr.
Atkinson-McDonough Steam Power Plants
Sonoco Products Co.
Nickajack Cr.
Atlanta Waterworks Intake
Sweetwater Cr.
Austell
Peachtree Cr.
ATLANTA
Clayton S.T.P.
Incinerators
Douglasville S.T.P.
Sandy Cr. S.T.P.
South Cobb Co. S.T.P.
Fulco S.T.P.
American Arts Metal Co.
Utoy Cr.
Utoy Cr. S.T.P.
N
South River S.T.P.
Intrenchment Cr. S.T.P.
Camp Cr.
Camp Cr. S.T.P.
KEY
○ Waterworks Intakes
△ Steam Power Plants
☐ Sewage & Industrial Wastes
Deep Cr.
Fairburn S.T.P.
0
5
MILES

MR. STEIN: Are there any comments or questions?

MR. HOWARD: Yes, I would like to make another comment, Mr. Chairman.

I will start with the last recommendation made.

> "A metropolitan sewer authority be established for the Atlanta area with statutory authority to determine rates as well as construct and operate wastewater treatment and collection facilities in accordance with a comprehensive plan to meet future needs."

Now, we said that back in 1965 to the Metropolitan Planning Committee and the Regional Planning Board and everybody else we talked to. That has nothing to do with this reconvened conference.

If we are going to get into that, we are going to be here about 10 years, trying to effect such a thing as a metropolitan authority, because we will get into the theory of politics, a little local prerogatives, and everything else.

We are trying, I think, to clean up the Chattahoochee River below Atlanta.

Now, all this stuff about a metropolitan water and sewage authority has been discussed before. We have said that is what we need here. It will take a lot of work to get it done, but we ought to lend our efforts towards cleaning up the

Chattahoochee River in accordance with Section 10 of the law. That specifies what we are meeting for, but Paul has gone ahead, in spite of my objection, bringing all that business in there about the metropolitan authority and other things that I think are not germane to this meeting.

I hate to be a nuisance, and I hope that some of my polluting friends don't misunderstand me, but I have a one-track mind. I think we have to get on the job and clean up, and then we will get into these other exotic ideas and these things that are being planned to put up.

You talk about coordinating and all this sort of nonsense. We ought to talk about implementing the program we have on the road, and not get into all these generalities and recommendations that are not a part of the conference and in which Paul has no jurisdiction at all.

MR. STEIN: Rock, even your nonpolluting friends got in places.

(Laughter.)

MR. HOWARD: I am not trying to offend anybody, but he is taking up things that are not part of the conference. These things about the water resources projects down below and navigation, we commented on that in 1965.

MR. STEIN: I understand that, but, as I read this, we have a main thrust in this statement, and perhaps you would want to comment on this now, or wait on this.

Presumably, what Mr. Traina is saying in dealing with the water quality is, given the kind of conventional secondary treatment with the water releases we have now, you are going to have little better than an industrial stream in major portions of your waterway in the area covered by the conference of significant proportions.

The question that he is raising is whether we want to form a technical committee to report back to the conferees and see, in addition to the requirements we have now, whether we are going to have additional requirements.

I would say that personally I agree with what you said on the other aspects, but I do agree that whatever you decide on this, this question is a legitimate one for the conferees to consider.

MR. HOWARD: Well, Murray, I don't take any issue with the idea of a technical committee, except my experiences with technical committees are not very favorable.

You will remember that we had a technical committee and a subtechnical committee on the Coosa River after the conference in 1963, and we didn't get any action until the State Water Control Board came on the scene and started working at the local level to get things done.

Now, we had all these committees. We have got some very serious technical problems to resolve not only in the Atlanta metropolitan area, but in other sections of Georgia, and I am all for doing that; but some of these other things he brought out here just don't have anything to do with this reconvened conference.

Now, in spite of our objections, they always come up with all of that stuff. You don't have to tell these people pollution is bad and all that sort of thing. They know that. You talk about eutrophication and all that stuff.

MR. STEIN: Rock, let's try to --

MR. TRAINA: I would like to comment on some of these things.

MR. STEIN: Just a moment.

MR. HOWARD: Remember, I get a rebuttal.

MR. TRAINA: You always do, Rock. You always do.

MR. STEIN: Just a moment. You are going to have the last word.

I would like to frame the issue before you people get started.

I too was a little surprised at Mr. Traina asking for a technical committee, and I can only attribute that to our moving him up to an administrative job. I remember years ago his big complaint to me was that I was always putting him on technical committees and that if I ever did that to him again, he would think about coming up to Washington and shooting me. Now he is recommending a technical committee himself, so I attribute that to maturity.

(Laughter.)

However, I think the point is well taken, Rock. I think if we really have a problem where we are not providing enough treatment under the present program and we should consider additional treatment, we are going to have to reconvene this conference to take this up and give the States and the Federal people an opportunity to do their homework on this and come up with a judgment on it.

But I do think, whatever you call this, Mr. Traina is recommending that when we work this out we try to do this with a Federal-State technical group working together, so hopefully we can come up with agreed-upon statements, at least from a technical point, on the scope of the operation, and not get into wrangles at conferences on what should be in and should not be in.

I think this should be handled. The point is, we have used the technique that Mr. Traina is talking about successfully on the Potomac River to come up, at least, with a program for a significant cleanup, and we have used this on Lake Michigan and Lake Erie to come up with joint Federal-State recommendations.

Now, I make no judgment whether we need anything beyond secondary treatment. But Mr. Traina is suggesting that we get some kind of mechanism for the States and the Federal people to do this, because if it raises a significant question, one way or another we are going to reconvene this and take this matter up. I would much rather have a joint report on what should be done than separate ones.

MR. HOWARD: We are going to have something beyond secondary treatment.

MR. STEIN: Right.

MR. HOWARD: We already have it in the Atlanta area, and we imposed it ourselves.

The thing I am telling you about is that this is not the time now to start talking about some of these way out things, about eutrophication and so forth.

You remember the technical committee we had in Savannah? I was skeptical of that. We needed a report. We wrote a letter. You all haven't answered the letter yet. Now, that's why I feel unkind toward technical committees.

I won't make an issue of that, but if I sit here and start reading Section 10 to you all, which is supposed to be the reason for us meeting, I would take a couple of days and go through all that song and dance and we won't get anything done.

All these points that he brought out today about a metropolitan authority for water and sewage we have talked about to civic clubs and everybody around here, and we have made the same statement in Savannah, but we don't think at this point that we need to start talking about political matters and social matters that are going to come about maybe 20 years from now.

MR. STEIN: You know, when you Southerners use that phrase and say "you all haven't answered the letter yet," I can't take that personally.

MR. HOWARD: I don't want to hurt your feelings, but you all didn't answer my letter, Murray.

(Laughter.)

MR. STEIN: You never sent a letter to me where you didn't get an answer some place.

MR. HOWARD: You know, some of our polluting friends, some of our clients that we have, would just like for us to get off on a rabbit chase up here studying some technical aspects of tertiary treatment, and so forth, and getting into water resources matters.

The State of Georgia is now considering, for example, the possibility of establishing a Water Resources Commission, and we may well do that.

Now, a lot of the things he talked about would come under the province of that body, and does not have any part in this conference, as I see it.

MR. STEIN: Mr. Thoman, do you want to comment?

MR. HOWARD: Don't start another one of those long tremors, Jack.

MR. THOMAN: Rock, all I am demanding is equal time.

MR. STEIN: I don't know whether we can stand it.

MR. TRAINA: I think our Federal time has been utilized --

MR. THOMAN: I want to make one comment, and one comment only, which is that the purpose of this statement is not to diminish in any way the need for immediate action by those people that are polluting the Chattahoochee River. I think it is doing nothing but reenforcing, Rock, the position that the people in the State of Georgia, as you have pointed out, have had since 1965, and that is 5 years ago.

I remember even before that being on a television program with the then Congressman Weltner, where these things were discussed then and the need for getting a metropolitan sewer system, and I think that all that is in this recommendation is to attempt to get at your level and my level some sort of a group going that can attack the problems that are going to occur in the future after you and I aren't here. If you want to deal with 23 separate political jurisdictions in the Atlanta area, it seems to me that your problems are multiplied 23 times.

MR. HOWARD: Nobody said they wanted to do that.

Nobody has ever implied it and said it.

MR. THOMAN: I didn't say you did.

MR. HOWARD: You made people think that I did.

MR. THOMAN: No. I think that -- well, let's drop the subject.

MR. HOWARD: One more comment, and I want to say this now:

Six man-days of our time were taken up reviewing a draft of this statement. We objected to certain things on the grounds that I mentioned here, and yet it comes right back, the same things, in the statement that we thought we had agreed to take out. That's what burns me up.

We set some ground rules and we have an understanding, and the first thing you know, it's not changed a bit. He comes up and gives the same statement we objected to.

MR. STEIN: Do you have anything further?

MR. TRAINA: No. I have no further comments at this time.

MR. STEIN: Rock, if you have complaints, you know I'm just as far away as a telephone.

MR. HOWARD: Next time we are going to have some written ground rules on the thing.

MR. STEIN: You don't need any written ground rules, I hope, with me. I never needed them with you.

MR. STEIN: All right. Are there any other comments or questions at this time?

(No response.)

MR. STEIN: Thank you very much.

Mr. Thoman?

MR. THOMAN: The next Federal speaker is Colonel John Redmond, Jr., who is Chairman of the Department of Defense Environmental Pollution Control Commission. He is attached to the Office of the Surgeon General of the Department of the Army in Washington, D. C.

Colonel Redmond.

STATEMENT OF

COLONEL JOHN REDMOND, JR.

CHAIRMAN, DEPARTMENT OF DEFENSE ENVIRONMENTAL
POLLUTION CONTROL COMMISSION, OFFICE OF THE
SURGEON GENERAL, DEPARTMENT OF THE ARMY,
WASHINGTON, D. C.

COLONEL REDMOND: Mr. Chairman, Conferees, Ladies and Gentlemen:

I am Colonel John Redmond, Jr., Chairman of the Department of Defense Environmental Pollution Control Commission.

I have a statement to present concerning the Air

Col. J. Redmond, Jr.

Force Plant No. 6.

It is the position of the Air Force to fully comply with the intent of Executive Order 11507 and to meet the deadline date of 1 July 1971 which was established by the Georgia-Federal Water Pollution Control Administration Chattahoochee River Conference on 14-15 July 1966. Subsequent to the FWPCA notification sent to the Aeronautical Systems Division on 17 January 1968, contractor and Air Force personnel at both local and division level have been diligently working on corrective measures. This is evidenced by two engineering studies employing different approaches to the solution of the problem which have been accomplished, reviewed, and brought up to date to comply with recommendations of both the FWPCA and the State of Georgia. These two engineering studies include results of additional surveys directed by Aeronautical Systems Division personnel on waste treatment.

The proposal selected satisfies the requirement of the FWPCA and at the same time is the least costly one, thereby complying with Air Force policy to utilize existing facilities to the greatest extent possible.

All known contamination possibilities generated by Air Force Plant 6, whether of an industrial, sanitary, or storm runoff nature have been considered and included in the project to insure their proper treatment.

At the present time, sanitary wastes from Air Force Plant 6, Lockheed private property, Dobbins Air Force Base, and the U. S. Naval Air Station are treated in compliance with existing FWPCA criteria in the Air Force Plant 6 sanitary sewage disposal treatment plant.

Air Force Plant 6 does not receive any industrial wastes from Lockheed private property, Dobbins Air Force Base, or the U. S. Naval Air Station for treatment.

HQ USAF approved the industrial waste treatment project on 5 February 1970 in the amount of $1,191,786. This project will segregate and treat all such wastes at the source.

It is the Air Force position, barring any unusual, unforeseen conditions, that construction on the industrial waste treatment plant at Air Force Plant 6 will be completed sufficiently in time for operation by 30 June 1971.

I have two short additional statements which have been furnished to me. One is on the Naval Air Station, Atlanta.

The Naval Air Station Atlanta presently has one known source of water pollution, that being an aircraft washrack with inadequate oil separation facilities. Although the pollution caused by this source is judged to be slight, a project has been initiated to install proper utilities for an aircraft washrack, including a separator to separate the oil and detergents from the wash water. Funds for design of this project have been authorized and completion of design is estimated for 15 March 1970. Assuming authorization of funds for accomplishment, this project should be completed by 30 June 1970.

I have another short statement on Dobbins Air Force Base.

All organic waste generated by Dobbins Air Force Base is fed to the sewage disposal plant operated by the Lockheed-Georgia Company where it is treated before discharge into the public streams.

Industrial Waste will be taken care of by an aircraft washrack. The waste will be confined and dumped into a separator, which will remove contaminants prior to discharge into the sewerage system. This washrack has been designed and approved. We have been informed that funding will be provided by 1 November 1970, and construction started by 1 December 1970. All work should be completed prior to June 1971.

Now I have a short statement concerning the private property of the Lockheed-Georgia Company.

In addition to the improvements on Air Force property, Lockheed has approved funds for all necessary pollution abatement work on Lockheed-owned property adjacent to Air Force Plant 6. This work will be completed within the same time span as that scheduled for Air Force Plant 6.

Thank you.

MR. STEIN: Thank you, Colonel.

Are there any comments or questions?

MR. HOWARD: Yes, Mr. Chairman.

May I say that I am very happy to hear that Lockheed and the Air Force are going forward now with a program of abatement.

The complaints that we have had date back to 1962 and we have a big file of them right here. There is no use going into that. It would waste a lot of time.

But we had a spill as recently as February 6th from Lockheed-Georgia, and it makes me very happy to know they are going to be on schedule.

MR. STEIN: Are there any other comments or questions?

(No response.)

MR. STEIN: Let me make a comment.

As I appreciate for the record, you are speaking for the Air Force and you may or may not want to comment on this, Colonel, but as I understand the situation, particularly at Air Force Plant No. 6, what you are going to do is separate the municipal and industrial wastes and the treatment facilities will be in operation by the deadline established by the conferees. The industrial wastes will be so treated that they will be rendered innocuous and may even approach or meet drinking water standards when they are put out; the domestic wastes will receive secondary treatment and chlorination before they are discharged.

If this is not the case, we should know about it, but I do not think that a program less than that will automatically meet full approval.

Thank you.

Mr. Thoman?

MR. THOMAN: I will call next on Colonel Robert E. Snetzer, District Engineer, Mobile District, United States Army, Corps of Engineers.

STATEMENT OF

COLONEL ROBERT E. SNETZER

DISTRICT ENGINEER, MOBILE DISTRICT, UNITED STATES ARMY, CORPS OF ENGINEERS, MOBILE, ALABAMA

COLONEL SNETZER: Mr. Stein, Conferees, Ladies and Gentlemen:

I am Colonel Robert E. Snetzer, District Engineer, Corps of Engineers, whose area does include the Chattahoochee Basin under discussion.

I have with me today Colonel Tabb, Deputy Division Engineer, Atlanta; Mr. Herbert Rogers, the staff member for water quality control, and Mr. Ruland from the Mobile District

Col. R. E. Snetzer

office in charge of our water quality control section.

This statement is presented to update our activities in the upper reach of the Chattahoochee Basin since this conference was adjourned in 1966. The Corps of Engineers is very much concerned with the water quality aspects of this area. The submission of our comprehensive study of the entire basin which has been under way for some time has been delayed because of this factor. Potential sites for impoundments both above and within the area covered by this conference are being studied fully to determine if storage for both water quality control and water supply are feasible as project purposes. Field coordination is being maintained with FWPCA, Georgia and Alabama, in the formation of any plans that are developed.

Considerable effort has been expended in the evaluation of a method to artificially destratify a reservoir utilizing compressed air pumping. Evaluations are being made to determine the feasibility of employing this method at the West Point project in the event post-impoundment conditions indicate that improvement in the water quality of the water released is required. Pre-impoundment studies are to be made by FWPCA and it is presently planned to incorporate an intensive monitoring and surveillance program at the project when it is placed in operation. A determination of any remedial actions that may be required will be based on the results of this monitoring and a post-impoundment investigation. The destratification method mentioned previously is only one of several alternatives that could be employed for the improvement of the quality of the released waters.

A water quality surveillance program is being undertaken on the projects throughout the Mobile District by the installation of a system of automatic water quality monitors. Once these monitors are in operation, we will have the capability to continuously monitor and record the quality of the water released from our projects which will provide the data that will be helpful in the development of criteria for future design and for remedial action at existing problem areas.

In this regard, we plan to utilize the monitor at our Walter F. George project to provide warning of low dissolved oxygen content in the area below the dam. It is believed that this condition has been responsible for distressing and at times even possible killing of fish. This condition is of an unusual nature and its occurrence has been rare. It is highly unpredictable, occurring one year and not the next and is of short duration. Our monitor will warn us of impending difficulties and allow us to conserve water for other uses and still maintain a satisfactory condition for the propagation of aquatic life downstream.

We are participating in pollution abatement on a more fundamental level by updating the waste treatment facilities at our projects. Septic tanks affording primary treatment only are being replaced with package-type treatment plants or other means of complete treatment to insure that the wastes discharged from our facilities have received the highest practical degree of treatment.

Water pollution abatement and water quality control are both considered to be very important in the Corps of Engineers' plans for future development and in the operation of the existing projects. We are open to suggestions for improving operations and welcome the support of interested parties. As the late General Walker emphasized to this conference in 1966, we are not taking an inflexible approach to the problems facing us in the development of our rivers. The Corps of Engineers' involvement in the area of water quality will continue to grow and we look forward to continuing our efforts to provide a healthier environment.

Thank you.

MR. STEIN: Thank you, Colonel Snetzer.

Are there any comments or questions?

MR. HOWARD: I would like to thank Colonel Snetzer too and say that we have enjoyed some outstanding cooperation with the Mobile District Office, Corps of Engineers, on water quality investigations and studies, and also on our monitoring program. We are grateful to you.

COLONEL SNETZER: Thank you.

MR. THOMAN: Thank you very much, Colonel.

MR. STEIN: Mr. Thoman?

MR. THOMAN: Are there any other representatives of Federal agencies who would like to make a statement? I don't have any indications of any, but if there is anyone who would like to, they are welcome to come forward at this time.

(No response.)

MR. THOMAN: Barring that, I would like to take this opportunity of recognizing publicly two very distinguished retired employees of the Federal Government that spent their career in the service of the Government: General Albrecht, the former distinguished Division Engineer of the Corps of Engineers here in Atlanta; and Mr. Burton Bell, who devoted his lifetime to water resources in Georgia, also of the Corps of Engineers.

With that, Mr. Stein, we may move on to the State presentation.

MR. STEIN: We will call on Mr. Howard for the presentation of Georgia.

MR. HOWARD: Mr. Chairman, before we make our agency presentation, I would like to call on some people here who have indicated they would like to make a statement. Some of them are from municipalities, some of them represent industry, and some of them represent a consulting engineering firm.

Is Mr. Joe C. Neal here?

Mr. Joe C. Neal is speaking for the Cracker Asphalt Corporation, I presume, and he is representing also International Pollution Control.

STATEMENT OF

MR. JOE C. NEAL,

REGIONAL MANAGER-INTERNATIONAL POLLUTION CONTROL, CRACKER ASPHALT CORPORATION, P.O. BOX 10081, ATLANTA, GEORGIA

MR. NEAL: Mr. Chairman, Conferees:

My name is Joe Neal and I am with International Pollution Control here in Atlanta, and I am representing Cracker Asphalt Corporation of Douglasville, Georgia.

International Pollution Control has been retained to design and install a pollution abatement system to render Cracker Asphalt Corporation's effluent acceptable for discharge, and their discharge stream is Cracker Stream, which eventually runs into the Chattahoochee River.

Now, we propose that this system will be completed by July 1, 1970.

That is all I have, Mr. Chairman.

MR. HOWARD: Thank you very much, Mr. Neal.

MR. STEIN: Are there any comments or questions?

MR. HOWARD: This is going to be very fine for our small tributaries out there, and also for the Chattahoochee River, because it has been a source of rather serious oil spill in the past.

MR. STEIN: Thank you very much.

MR. HOWARD: Next we have Mr. Jack Cameron, representing the city of Atlanta, who would like to make a statement.

Come up, Jack.

STATEMENT OF

MR. JACK CAMERON,

DIRECTOR OF WATER POLLUTION CONTROL, CITY OF
ATLANTA, PUBLIC WORKS DEPARTMENT, ATLANTA,
GEORGIA (IN BEHALF OF THE HON. SAM MASSELL,
MAYOR OF ATLANTA, GEORGIA)

MR. CAMERON: My name is Jack Cameron. I am Director of Water Pollution Control for the City of Atlanta.

Mayor Massell has asked me to make a statement on his behalf.

It is a pleasure to welcome you to our city.

While it may not at first be readily apparent, a great deal of progress has been made by the city toward the protection of the quality of the Chattahoochee River since the initial enforcement conference on the Chattahoochee River held in Atlanta in July of 1966. In 1967, a sewer service charge was initiated which provided the city with a continuing source of revenue to be used only for the financing of water pollution control facilities. It is recognized by the city that the present sewer service charge of 50 percent of the water bill is insufficient to finance the necessary water pollution control facilities, and I am recommending to the Board of Aldermen that the sewer service charge be increased as required to finance these facilities.

Approximately one year ago, the first contracts totaling $3,500,000 were let for the initial phase of construction of the R. M. Clayton Water Pollution Control Plant. The Clayton Plant, which serves an area of 158 square miles, is being expanded to a capacity of 120 MGD, and will be capable of achieving 85 to 90 percent treatment with effluent chlorination. It is anticipated that the second contracts in the amount of $4,000,000 will be let in the next few months. The third and largest contract, totaling approximately $17,000,000, is scheduled to be let around the end of this year. The ultimate cost of this facility, which will be the largest municipal water pollution control plant in the Southeast, is estimated to be

J. Cameron for Hon. Sam Massell

$35,000,000. The design of this facility is now 60 percent complete. Our present schedule indicates that these secondary facilities will be in operation by the end of 1972.

Changes which have occurred since the 1966 conference have caused us to alter our plans in regard to the relatively small area (5 square miles) tributary to the existing Sandy Creek Plant. The site originally planned for expansion of the Sandy Creek Plant is no longer available for use and it has been determined that it will be economically feasible to pump the wastewater from this area, together with waste from an area in the Proctor Creek Basin, to the general vicinity of the Utoy Creek Plant for treatment. Funds have been budgeted for this fiscal year to provide the sewers and pump stations necessary to accomplish this. An application for a grant for this facility will be submitted to the Georgia Water Quality Control Board prior to May 15, 1970. Completion of the Proctor-Sandy-Utoy Creek system is scheduled for the end of 1972.

We regret that circumstances beyond our control will not permit the city to meet the July 1971 deadline which was made in the enforcement conference in 1966. However, we believe that the facilities now under design will be second to none in the Nation in efficiency and effectiveness.

The operation of existing and future wastewater treatment facilities by the city is and will continue to be superior in nature. The city is well on its way toward meeting requirements for certification of water pollution control operators as required under the recently enacted State legislation, with more than 70 percent of our operators holding certificates.

It is the standing policy of the city to encourage and accept industrial discharges into the sewers and treatment facilities of the Atlanta municipal sewer system. I am sure it will be brought out in the course of this conference that a number of existing pollution problems are to be resolved in this manner.

At the time of the initial enforcement conference on the Chattahoochee River in 1966, the city planned to attempt separation of combined sewers in the 23 square miles of the city served by such sewers. It was estimated that separation of combined sewers would cost in the neighborhood of $200,000,000. Since the conference in 1966, there has been nationwide recognition of the fact that the stormwater itself is of extremely poor quality from both a bacterial and a chemical standpoint. It has generally been concluded that the massive expenditures for separation of sewers cannot be justified in view of the poor quality of surface runoff. The city has therefore abandoned its plan to separate sewers except in its areas where it is economically feasible. The city is presently engaged in a joint venture with the Federal Water Pollution Control Administration to study the problem of combined sewers in one of Atlanta's major drainage basins. This overall study is expected to provide the city with alternatives to separation which would bring about the desired protection of our water quality. The city is proceeding with plans to provide facilities for the removal of grit from interceptor sewers in order to prevent the stoppage and loss of sewer capacity which results from the accumulation of such grit in the interceptors.

It is most gratifying to see that the Federal Government has, for the first time, appropriated funds for water pollution control in keeping with its commitments. The State of Georgia has not, on the other hand, acknowledged her responsibility in this regard by providing financial assistance to her municipalities. We request and urge the State government to join in this cooperative effort as a full and responsible partner.

The State of Georgia is to be commended for its effective and energetic programs. It is hoped that the State will be able to strengthen these programs as well as make more Federal funds available to municpalities by appropriating State funds for water pollution control facilities.

Thank you. That is the end of my statement.

MR. STEIN: Thank you for a very full and complete statement, Mr. Cameron.

Are there any comments or questions?

MR. CAMERON: I would like to make a number of additional comments myself.

MR. STEIN: Surely. Go ahead.

MR. CAMERON: With regard to release practices of Buford Dam, I think there has been a lot of argument for many years about what is the legal requirement for release practices. I won't debate that point at the moment, but I will say that the release patterns can be modified to substantially increase minimum flows with negligible loss in power revenues. The Federal Water Pollution Control Administration could, if it would, bring pressure on the Corps of Engineers to make such modifications.

The second comment I wanted to make was --

MR. STEIN: We will do that, but let me tell you our hands would be much strengthened if we were to go to the Corps of Engineers and say the people downstream were removing the maximum amount of waste at the source in accordance with the requirements of the conference. If we can't do that, our position with the Corps is very weak.

MR. CAMERON: Well, I understand that this can be done.

MR. STEIN: Right. We are in agreement.

MR. CAMERON: Yes.

The second thing I wanted to mention is that I am puzzled by the fact that Mr. Traina referred to the construction of downstream impoundments as inevitable, when in fact they have not even been shown to be economically feasible, in spite of the fact that substantial recreation benefits have been assigned to these reservoirs.

The idea of having recreation in a reservoir immediately below Atlanta has been recognized by State officials and city officials and the officials of the Metropolitan Planning Commission as being entirely impractical and quite ridiculous, really, in view of the fact that river flows in the future will be 20 to 30 percent or more treated sewage.

Regardless of the degree of treatment, I think you would have a difficult time getting people to recreate in those waters.

Here again I believe that the State officials, city officials, and officials of the Metropolitan Planning Commission, have all recognized the fact that attempts to use these impoundments for recreation just doesn't make sense, and I think this should also be acknowledged on the Federal level.

That is all I have to say.

MR. HOWARD: I'm glad you said that, Jack. I thought Paul Traina was getting out too far. I couldn't stop him, you see. I couldn't stop him.

MR. STEIN: Well, you tried.

You know, Rock, they tell me that both you and I are mellowing as we get older.

MR. HOWARD: That's right.

MR. STEIN: You should have seen us years ago. But they didn't tell me they adjusted you to 100 proof.

(Laughter.)

MR. HOWARD: I would like to make a comment here because the city of Atlanta has done a great deal, but to be completely honest, they could have done a good bit more than they have done. I know they could not meet the deadline of July the 1st, but if there had been a vigorous high priority given to this matter of cleaning up, we would be further along with the job.

Now, the past administration was a fine administration, but when the mayor we had went out of office, in his farewell speech he didn't mention one word about water pollution control problems that he had and didn't solve. The one who just came in, who is a fine person, didn't mention anything about water pollution control or sewage facilities when he had his inaugural speech. Those kinds of things disturb me.

The other comment I have is about the Federal and State grants. I have been begging for State grants for five years, and I begged twice yesterday. We may get some in time, but even if it is just a token I would like to have them.

However, at the same time, we are not responsible for the wastes that you generate in the city of Atlanta. The water resources of the Chattahoochee belong to the people.

The Federal Government has not yet appropriated up to the authorized amount, although we have been told there is going to be some $800,000,000 appropriated. I hope that is true and I hope that we get some of it and that it comes on down, and we will use it.

However, we think the State ought to take a responsible attitude and provide grant funds to help the city of Atlanta. On the other hand, if Atlanta had done more in the past, we would not have that big problem today.

MR. STEIN: Let me comment on your last remark before we get into some of these details, because I think what you have said about Federal and State commitments has been repeated by many, many cities in the country. I would like to make a comment on that.

The point is an authorization does not mean that the Federal Government has a commitment. What we have is a hunting license.

I am in favor of increased Federal financial aid and increased State aid where we can get the States to do it, but, as far as I can see under the law, anywhere in the country, this is not the responsibility of the State or the Federal Government except for the Federal installations.

The Federal Government and the State are not polluting the Chattahoochee River. It is the city, and the responsibility for the cleanup is the responsibility of the municipality or the industry creating that pollution, not the Federal Government or the State.

The commitments that we were looking for through the years and the time schedules have been from the cities and the industries.

I don't think it absolves anyone to point out when you have missed the deadline or you have people like Mr. Howard and myself trying to deal with a problem that has been 50 years in the making, or indicate that somehow the State and the Federal Government have this commitment. We are trying to help out, but the legal commitment is on the cities and the industries and not us to do that.

Mr. Thoman?

MR. THOMAN: Jack, with all due respect to you -- and I appreciate your statement very much -- I am extremely disheartened that Mayor Massell or Vice Mayor Jackson are not present today to indicate to the conferees that the city of Atlanta has an honest to goodness commitment at the highest levels to the furtherance of pollution abatement in the

Chattahoochee River.

You are slightly behind the original schedule. There are always some extenuating circumstances and I suspect that there are good and logical reasons.

I do take some issue with one or two of the things that you said. I take issue for the simple reason that the city of Atlanta by its location is the only very large metropolitan area of the 25 largest, I believe, that is not located on the ocean, the Great Lakes, the Mississippi, the Ohio or the Missouri River. By virtue of its location, which you and I had nothing to do with, it is going to have to give to its wastes an extremely high degree of treatment. I think in the future it will have to give a significantly higher level of treatment than it is presently proposing.

This was really the basis of Mr. Traina's statement to the conferees this morning.

I want to again reiterate I will take very violent exception to your statement that people will not recreate in tertiary treated water. There is an experiment with which I think you are familiar at Santee, California, where not only did they recreate in it to the tune of some 25,000 people on a normal weekend -- they swim in it -- but the voters of the Santee Water District have also recently passed a bond issue within the last two years which provides for direct connection of the reclaimed water from its wastes to the potable water system of the city.

While I am not proposing that the city of Atlanta will ever have to do this -- I don't believe it will -- this is an actual fact in Southern California and in other parts of the world today, and we may well see it in the Chattahoochee River if and when the Corps of Engineers' plans providing navigation to the city of Atlanta become a reality.

Again, I thank you for your very fine statement.

MR. CAMERON: I would like to first of all say that the surface water runoff alone is enough to make the Chattahoochee River or any impoundment below Atlanta unsuitable for recreation. I don't think they have this condition at Santee, California.

The second thing is that there are abundant recreational waters near to Atlanta which make the necessity of recreating in treated sewage unnecessary.

With regard to navigation to Atlanta, just since it has been mentioned, I don't think that the barge trade is adequate even to justify locks. I believe this has been shown.

To what purpose is this high degree of treatment pointed if recreation is not its justified use? In other words --

MR. THOMAN: Jack, I don't believe that is germane particularly to this discussion here, as Mr. Howard pointed out before.

I would point out, sir, that you are talking somewhat as a polluter now and are against any impoundment of that river because the city of Atlanta is going to have to put in additional waste treatment if they are impounding.

MR. CAMERON: If the additional treatment is required only because of the impoundment, then, in fact, the cost of the additional treatment is a cost attributed to the impoundment and it should be paid for by the impounders.

(Laughter.)

MR. STEIN: You know, the difficulty with this is that the cost doesn't change the Federal law. We have a law, and who pays for what --

MR. CAMERON: You are talking about changing the law, though, and changing the standards over what they are today.

MR. STEIN: No, we are not changing the law at all.

Let me say what I get out of this. If you have some streams right now, regardless of impoundments, which are classified as industrial streams, and if you are talking about discharges coming from the reservoirs, what I got as the thrust of Mr. Traina's remarks was this -- and let's get down to this because I think this is the evidence -- that even without these impoundments there are going to be stretches of the Chattahoochee

River and its tributaries in the Atlanta area, in the area covered by the conference, which are going to be of such quality after the proposed treatment, even with, let's assume, the slippage that you have indicated in it, that it would seem from their point of view that additional treatment is necessary. This is aside from impoundments. This is what I got from that statement.

Now, if I misunderstood, I would like to know it.

MR. CAMERON: Well, I believe that the studies of the engineers have shown that the degree of treatment planned for the Chattahoochee will suffice to maintain the standards as they are presently set into the year 2000 anyway. Beyond that, certainly there may be additional treatment required.

MR. STEIN: Let me in on a secret. I have also been given, for one reason or another, the standards for this. And I tell you, as I said down in Alabama a few weeks ago, and I have said all over the country -- and let me go back to a northern State, New Jersey, when it was pointed out to me that the Passaic River was, after all, classified as an industrial stream -- I said, "An industrial stream is a euphemism for an open sewer."

As far as I am concerned, the kind of standards and the water quality that the people are looking for are not open sewers in metropolitan areas. If your treatment is going to bring this up to the classification of a standard of an industrial stream and you think you are going to live with that until the year 2000, I think you had better take another look at yourself, because if you don't you will be looking at me because I'm going to be right here on your doorstep.

MR. CAMERON: I don't think that the standards that have been set for the industrial quality would really classify it as an open sewer. I believe three parts per million is the figure, but anyway --

MR. STEIN: Let me ask you a couple of factual questions to get this clear.

Are you going to have secondary treatment?

MR. CAMERON: Certainly, we will have 85 percent treatment.

MR. STEIN: What are you designed for, 90 percent removal?

MR. CAMERON: Yes.

MR. STEIN: And 85 to 90 percent BOD removal?

MR. CAMERON: That's right.

MR. STEIN: Do you expect to disinfect?

MR. CAMERON: Yes.

MR. STEIN: Year-round?

MR. CAMERON: Yes.

MR. STEIN: Thank you.

MR. HOWARD: We have imposed these criteria on the city of Atlanta, and we told them at the same time, like we always do, that these are not forever and they may have to change them one way or another according to what people need.

MR. STEIN: Yes. Thank you very much.

MR. HOWARD: You see what I mean by rabbit hunting, Mr. Chairman?

I would like to say on behalf of Mayor Massell and Vice Mayor Jackson that they actually did express to me a disappointment that they could not be here this morning. They had other commitments.

I got a very nice letter from Mayor Massell. He said he was very interested in getting the program under way, and he commended the Georgia Water Quality Board.

But I would like them to do something and get on the program, you know.

MR. STEIN: Here you complain about not getting any letter from us, and even if you get a nice letter, it's not enough.

(Laughter.)

MR. HOWARD: I get those all the time from my clients.

I would like to make one other comment that refers to Colonel Redmond's statement.

Lockheed actually, as far as their sanitary sewage is concerned out there, are going to have to go to probably tertiary treatment because of their discharge in a very small stream. That doesn't have anything directly to do with the interstate pollution of the Chattahoochee River, but they do discharge to a very beautiful stream. It could be beautiful. It is very small, and we are probably going to require tertiary treatment because of the necessity.

MR. STEIN: Again, I think you have raised the question here. This is the very thing that Mr. Traina raised, and we may accept or reject it. However, as I understand it, the point he is raising is that this may be the time for us to start thinking of the possibility of tertiary treatment for all your communities and possibly some of the industries in the conference area. This would go beyond our present requirements. What he is proposing, as I understand it, is to get some kind of mechanism so the technical staff can give the conferees a report, say, in about a year's time on the appropriateness of that.

This is the essence of what I got from what he said.

MR. HOWARD: Well, we have already had the advanced treatment and we don't have all our answers yet.

As a matter of fact, we have one city where we are going to recycle 5 million gallons a day of industrial waste and then reuse it, which is a good example of conservation and use too without abuse.

I would like to ask Jack one more thing. You mentioned a study you were making with the Federal Water Pollution Control Administration.

MR. CAMERON: Yes.

MR. STEIN: When is that going to be completed and published?

MR. CAMERON: I understand that it will be sent in July.

MR. HOWARD: The report was finished in November and we need the information.

MR. THOMAN: I assure you, Mr. Howard, that that will receive top priority.

MR. STEIN: Let's recess for five minutes.

(Whereupon a recess was had.)

MR. STEIN: Let's reconvene.

Mr. Howard?

MR. HOWARD: Mr. Chairman, I would like to call Mrs. Robert Hicks from Marietta, who is the Director of the Marietta Cobb League of Women Voters. She would like to submit, I believe, a written statement.

MRS. HICKS: I will read it.

MR. HOWARD: Good.

Mrs. R. E. Hicks

MR. HOWARD: Thank you.

STATEMENT OF

MRS. ROBERT E. HICKS,

DIRECTOR, MARIETTA-COBB LEAGUE OF WOMEN

VOTERS, P. O. BOX 101, MARIETTA, GEORGIA

MRS. HICKS: Mr. Chairman:

I am Mrs. Robert E. Hicks of Marietta, Georgia, a director of the Marietta-Cobb County League of Women Voters and chairman of its water resources committee. I am speaking for our 100 countywide members. We ask this conference to continue strict enforcement of pollution abatement in the Chattahoochee River and to set realistic time limits for compliance from polluters.

Cobb County's 1969 $35 million water and sewer revenue bond issue shows that the cost of correcting water pollution, with revenue bond financing, is high for the individual domestic customer. Even so, the county has acknowledge responsibility to control its pollution of the Chattahoochee by constructing the first unit of a planned countywide sewer system.

We urge this conference to call upon the genius of the Lockheed-Dobbins complex, located in Cobb County, to meet the July 1971 deadline for compliance of adequate treatment of industrial waste discharged into Nickajack Creek, so as not to undermine the county's efforts to abate pollution of the Chattahoochee.

Our League supports the efforts of the Georgia Water Quality Control Board. We ask the Board to enforce the water quality standards, to prod constantly and to make public the polluters of the Chattahoochee River.

Thank you for the opportunity to appear here today.

MR. STEIN: Thank you, Mrs. Hicks.

Are there any comments or questions?

(No response.)

MR. STEIN: Thank you for a very excellent statement.

MR. HOWARD: Are there any more dear ladies from the League who would like to make a speech in support of the Georgia Water Quality Control Board?

(Laughter.)

Mrs. Bremberg has been a pretty good politician around the Capitol.

STATEMENT OF

MRS. BRUCE E. BREMBERG,

LEAGUE OF WOMEN VOTERS, 4413 DUNHAVEN ROAD,

CHAMBLEE, GEORGIA

MRS. BREMBERG: I am Mrs. Bruce E. Bremberg and I am water quality resource chairman on the Georgia League of Women Voters State Board.

As Mr. Howard said, I have no prepared speech, but I have just been at the Capitol with Senator Lamar Plunkett and Representative Jim "Sloppy" Floyd, discussing the reasoning behind the elimination of the $5 million for sewage treatment plants in the State of Georgia.

There seems to be a vast amount of misinformation, whether deliberate or through ignorance or malice I know not, but last night the Senate did pass an appropriations bill without one cent of money for sewage treatment plants in the State of Georgia.

They did, however. give Mr. Howard the 16 additional inspectors that he desired.

The conference committee will be meeting this afternoon and so, gentlemen, you have one last gasp to plead for, to insist upon and to show the desperate and appalling need for those funds. If you all care to leap up and run down, don't bother now because they are leaving for Trenton, Georgia, for a funeral, but they will be back this afternoon. It is the last chance you will have to get the 5 million absolutely necessary dollars.

The cities can't accept the responsibilities and float bond issues. They can issue additional water rate hikes, but you and I and everybody else knows that they would just as soon not do it. They would like to pass the buck to the "State" and if the State doesn't accept this responsibility, we are going to have more floating raw sewage and rotten pollution.

Thank you.

MR. HOWARD: Thank you, Mrs. Bremberg.

MR. STEIN: Thank you.

MR. HOWARD: Is Mr. Bob Sutton here from the Cobb County Water and Sewerage System?

MR. SUTTON: Yes.

MR. HOWARD: Are you going to say a few words?

MR. SUTTON: Yes. If you don't mind, while I am coming, I would like to introduce to the conference Mr. Ernest Barratt, the Chairman of our Board.

MR. HOWARD: When Mr. Barratt decided to have a bond issue everybody thought he was crazy, but it turns out now that the rates went up so much that he did a very wise thing, actually.

MR. THOMAN: Mr. Barratt, on behalf of the Federal Government, I want to welcome you here today.

You have evidenced by your being here the interest in proper waste treatment in Cobb County. Thank you very much.

STATEMENT OF
MR. ROBERT L. SUTTON, JR.,
MANAGER, COBB COUNTY WATER AND SEWERAGE SYSTEM

P.O. BOX 529
MARIETTA, GEORGIA

MR. SUTTON: My name is Bob Sutton and I am Manager of the Cobb County Water and Sewerage System.

Gentlemen, in June of 1969, Cobb County, Georgia, embarked upon a capital outlay program of $27 million, of which the customers of Cobb County Water and Sewerage System will be paying some $22 million and the Federal Water Pollution Control Administration will be paying some $5 million.

In order to borrow our share of the money, we had to refinance our entire outstanding obligation against the system. This made the amount of money needed come to $35 million, which Mrs. Hicks alluded to.

It was interesting to note that Mr. Cameron was talking about a raise in rates. We raised the rates and had a tremendous increase in rates, which the people of Cobb County are paying for.

R. L. Sutton

The program, as outlined in our Comprehensive Sewer Study for Cobb County dated February 1967 divides the development of sewerage in our county into four phases, with the last phase planned to be completed in 1986. The county in the program that we undertook in June of 1969 is moving into Phase "A" or Phase "I." Phase "A" consists of the installation of interceptor sewers along Rottenwood Creek, Nickajack Creek and the Sweetwater Creek, which is tributary to the Chattahoochee River. We have taken bids, awarded contracts, and clearing has begun on the Nickajack Interceptor.

In our planning and sizing of these interceptors our engineers used a projected population for the year 2020. Each of these interceptors will be brought to the three wastewater treatment plants designed to give secondary treatment. This will consist of expanding the plant at South Cobb and building two new plants, one on Sweetwater Creek and one on the Chattahoochee River at Bolton. Even though this is a conference on the pollution of the Chattahoochee, I must call attention to the fact that Cobb County under the Phase "A" of its program is constructing an interceptor and treatment facility in the Noonday Creek Basin that is tributary to Lake Alatoona.

In Cobb County we have 6 cities and 2 industrial communities that either have treatment facilities or need treatment facilities. It was the intent of the study to provide the necessary size of line and facility in order to remove from our streams in Cobb County any waste, treated or untreated.

Under Phase "A" we are providing the lines and facilities necessary to accomplish this intent to the cities of Smyrna, Austell and Powder Springs and serve the Olley Creek portion of Marietta.Coats and Clark Mill at Claredale and Lockheed-Georgia at Dobbins Air Force Base are the two industrial communities that we are working with in an effort to remove their treated or untreated waste from our streams. As you gentlemen know, industrial waste can present a problem.

Cobb County has as its objective the completion of Phase "A" of its sewer program in December 1972. If at all possible, we hope to be completed earlier than this.

Gentlemen, in concluding I would like to say that the Board of Commissioners of our county and the people of our county are meeting the requirements of this conference in removing pollution from the Chattahoochee.

I would also like to say that I believe we are ahead of any other polluter with our program where it is today.

Thank you for your time, and come to see us in Cobb County.

MR. STEIN: Thank you.

Are there any comments or questions?

(No response.)

MR. STEIN: What kind of treatment are you going to provide for your domestic wastes?

MR. SUTTON: Secondary.

MR. STEIN: What is the percentage of removal?

MR. SUTTON: It will be somewhere between 85 and 90 percent.

MR. STEIN: Are you going to disinfect?

MR. SUTTON: Yes.

MR. STEIN: Year-round?

MR. SUTTON: Yes.

MR. STEIN: Then the only problem we have is slippage from the date set at the original conference. Is that correct?

MR. SUTTON: That is correct.

MR. THOMAN: Will the new plant on Sweetwater Creek be finished by 1972?

MR. SUTTON: December 1972. Yes, sir.

MR. THOMAN: In other words, that will be through. South Cobb will be enlarged by then too?

MR. SUTTON: That is right.

MR. STEIN: You are about a year and a half behind?

MR. SUTTON: From the conference date.

MR. STEIN: Yes.

Are there any other comments or questions?

(No response.)

MR. STEIN: If not, thank you very much.

MR. SUTTON: Thank you.

MR. HOWARD: I would like to call on Mr. Howard M. Hoffman.

MR. HOFFMAN: Mr. Chairman, I am Howard Hoffman --

MR. STEIN: Would you come up here, sir?

I would like to point out the key man here is the court reporter, and we really have to cooperate with him if he is going to do his job.

STATEMENT OF
MR. HOWARD M. HOFFMAN,
PRESIDENT, NORCOB CORPORATION
GRANITE SPRINGS ROAD, ROUTE 1
NORCROSS, GEORGIA

MR. HOFFMAN: Mr. Chairman, Conferees, Ladies and Gentlemen of this Meeting:

I am going to make the shortest comment of the day.

The things that I wanted to discuss and talk about have been more than adequately covered by previous speakers, and thank you for the opportunity of coming to your microphone.

MR. STEIN: Thank you.

MR. HOWARD: Thank you for a brief statement.

(Laughter.)

Mr. Chairman, I would like to ask Mr. Turner McDonald of Fulton County, Public Works Superintendent there, if he would like to brag a little bit about Fulton County, like Bob Sutton has about Cobb County.

STATEMENT OF
MR. TURNER McDONALD,
DIRECTOR, PUBLIC WORKS
FULTON COUNTY
ATLANTA, GEORGIA

MR. MC DONALD: Mr. Chairman:

I want to personally thank Mr. Howard for the spice that he has added to this meeting.

(Laughter.)

I represent the Commissioners of Fulton County, who are attending a meeting at this hour, or they would have been here.

My name is Turner McDonald, and I am Director of

T. McDonald

the Public Works Department of Fulton County.

Fulton County is part of the Metropolitan Sewerage System, established in 1938, including the city of Atlanta, DeKalb County, and our county.

We have four treatment facilities that are discharging into the Chattahoochee River, two above Atlanta's intake that are complete treatment, one the Big Creek Plant, and the other the Marsh Creek Plant. We have two plants that are located below Atlanta's intake, the Fulco Plant, and serving our industrial area is a primary facility, and under the study that has been made the planning has been done with Atlanta and their consultants and our consultants.

We propose to pump the effluent to the Utoy Plant, which is to be upgraded by 1972 under contract let by the city of Atlanta.

The other facility is known as Camp Creek. This plant serves Atlanta, Fulton County, Eastport and College Park. It was built under a joint contract whereby each governmental agency paid a percentage of the cost based on use.

This plant is being designed and updated to complete treatment to handle some 7-1/2 million gallons. I understand that the plant will be completed in June of this year.

Sometime in September Fulton County will let a contract with the other agencies participating in the cost.

The complete treatment plant will be completed in December of 1972.

This concludes my statement, Mr. Chairman.

MR. STEIN: Thank you.

Are there any comments or questions?

MR. HOWARD: Thank you very much, sir.

MR. THOMAN: Just a minute. I have some questions.

In Mr. Traina's statement he indicated that there is a large developing population, I believe, in Fulton County, which would not be served by sewerage systems, and I think some 200-some-thousand people by the year 2000.

Are these in Fulton County or are they in some of the other counties?

MR. MC DONALD: I am sure we hope to have more people than that in Fulton County by that time.

MR. THOMAN: No. I mean that are not served by sewerage systems. I would hope you have more people.

MR. MC DONALD: Yes. We have only a small percentage of our county, some 80 miles in length -- that is, of the area, not the people -- not served by sewerage facilities, but we are planning now to meet that challenge ahead and we are studying the unsewered areas and we have a report made. We are cognizant of the problems we are going to have in zoning land.

We are trying to stay on top of that, sir.

MR. HOWARD: Thank you.

MR. STEIN: Again I assume, Mr. Howard, that is also providing secondary treatment and year-round disinfection?

MR. HOWARD: Right.

MR. STEIN: And about a year and a half behind the schedule?

MR. HOWARD: That's right.

Now, I think, Mr. Chairman, we ought to take a look at the Chattahoochee River above Atlanta and below Atlanta to get a current, up-to-the-minute almost, picture of just what the water quality is down below us and above us.

I would like to call on Mr. Ledbetter, our Director of Water Survey Service, to give you a complete rundown and present data for the record to tell you just where we stand. These are facts that I think we ought to all consider.

MR. STEIN: This will conclude the non-State representatives?

MR. HOWARD: Right, unless there is someone else.

MR. STEIN: I would like to ask one question.

Don't you have any industrial dischargers, or have they decided not to come up?

MR. HOWARD: We've got a long story. They were scared to come up here.

MR. COLBATH: Mr. Chairman, I would like to make a statement on behalf of the Bibb Manufacturing Company.

MR. HOWARD: We will be glad to have you come up here, but your name wasn't on this list.

MR. COLBATH: That's fine.

MR. HOWARD: This always happens, but we will ask you to come up.

MR. COLBATH: He was asking if you didn't have anyone.

MR. STEIN: Let me say this -- and I put this out from the Chair -- that I have had the firm belief -- and I think Mr. Howard and Mr. Thoman and Mr. Beck share this with me because we have been through this many, many times -- that no one can tell your story the way you can yourself. For the industrial firms, if they are just going to sit back and not avail themselves of this opportunity to take advantage of telling their stories, I think we have to follow the reports we get from the officials on that and proceed with the situation on the basis of the facts adduced before this conference.

However, I want to make it clear again that the podium is open for any industrial representative or anyone else who wants to make a statement.

Will you go ahead, sir?

STATEMENT OF
MR. H. S. COLBATH,
CORPORATION CHIEF ENGINEER
BIBB MANUFACTURING COMPANY
MACON, GEORGIA

MR. COLBATH: My name is H. S. Colbath and I am the Corporation Chief Engineer of the Bibb Manufacturing Company.

For those of you who do not know who the Bibb Manufacturing Company is, we are a textile outfit in Georgia with about 18 plants.

I will address myself to the program at hand. In 1966, I believe it was, we were cited to clean up our properties on the Chattahoochee River. We were given until February 10th of 1970 to do this, and I am happy to say that on February the 10th we tied in our last sewer.

At the Newnan Plant we built an aeration pond, and although it was not required, this year we installed several aerators. This water goes into Wahoo Creek and is reportedly in good condition.

At the Arnco Plant, which is near Newnan, we had a nice little plant that had been constructed for domestic sewage. I suppose this thing is about 35 percent efficient, and we were instructed by the Water Quality Board to rehabilitate this plant, which we did completely, called in experts and completely rebuilt this plant, and we tied in our sewage and also built an aeration lagoon with postchlorination. We pass all of our sewage through this primary plant, remove all the solids, we have a digester, and it is thrown into the aeration pond, where it is aerated. Before it goes back into Wahoo Creek it is chlorinated.

This plant was put into operation on February 10th.

At Columbus, Georgia, we have two plants. Here we pay the city of Columbus to handle our sewage.

At Macon, Georgia, we do the same thing.

At Reynolds, Georgia, we have built an aeration lagoon and a settling or polishing pond.

Above Macon, Georgia, about 22 miles, we have a very large facility for treating our sewage there. To give you some idea, there is 1,500 horsepower of aerators in this lagoon, and then we go into a polishing lagoon where the water is polished and settled, and with floating aerators, the BOD taken care of, and then we chlorinate it and send it on into the river.

We have met all the requirements up to date, except for the city of Porterdale, and we are working on that.

MR. HOWARD: Thank you, Mr. Colbath.

I want to say publicly that the Bibb Manufacturing

Company has done some real meaningful work to clean up their problems. They have cooperated fully with us, and we are pleased to acknowledge that, and I thank Mr. Colbath for coming here today.

MR. STEIN: Thank you, sir.

Are there any others?

MR. HOWARD: Any others of any polluters who would like to make a voluntary statement?

(Laughter.)

(No response.)

MR. HOWARD: Well, I would like to have Mr. Ledbetter now. He will give you a picture of the river as he understands it today.

STATEMENT OF
MR. J. L. LEDBETTER,
DIRECTOR, WATER QUALITY SURVEYS SERVICE
GEORGIA WATER QUALITY CONTROL BOARD
ATLANTA, GEORGIA

MR. LEDBETTER: Thank you, Mr. Howard.

Mr. Chairman:

I am J. L. Ledbetter, Director, Water Quality Surveys Service, Georgia Water Quality Control Board.

Following the 1966 conference, the Georgia Water Quality Control Board (GWQCB) recognizing the absence of comprehensive water quality data for the Chattahoochee River. Through the cooperative efforts of the Georgia District of U. S. Geological Survey (USGS), the Columbus Water Works, the Atlanta Water Works Department, and the Atlanta Public Works Department, the Georgia Water Quality Control Board established a pollution surveillance network for the Chattahoochee River. Approximately 25 sampling stations (see Table I) were selected in the reach of the Chattahoochee under consideration in this conference. Monthly grab samples are obtained at these sites and certain tests conducted in the field by the cooperating agencies. Most laboratory analyses are made in the State's laboratory in Atlanta.

The extensive water quality data compiled for the past two years cannot be presented in detail. However, a summary of the information will be discussed for pertinent reaches.

Four public water supply intakes are located on the Chattahoochee River between Buford Dam and the city of Atlanta. The population served and approximate average daily pumpage were furnished to us by personnel of the four systems:

WATER INTAKE	AVERAGE DAILY USE (MGD)	POPULATION SERVED
Atlanta Water Works	93.0	650,000
Cobb County	13.5	96,000
DeKalb County	41.5	360,000
Gwinnett County	4.0	10,000
TOTALS	152.0	1,116,000

In this reach of the Chattahoochee River above Atlanta, approximately 50 small wastewater treatment facilities, with a combined design capacity of 8.43 mgd, discharge to the river or its tributaries -- mostly to tributaries. The majority of these wastewater treatment facilities are small package plants or waste stabilization ponds.

With the possible exception of iron and manganese concentrations, the river below Buford Dam is of very high quality. As the river approaches Atlanta, there is some degradation, mostly bacterial as a result of the upstream effluents and urban runoff. Our 1969 data reflected some improvement in the bacterial quality over 1968. Since this reach of the Chattahoochee provides water for almost one-third of Georgia's population, a consistent level of high quality is essential. With the continued excellent cooperation and support being provided by the Atlanta Water Works Department, the GWQCB will continue to monitor closely this vital reach of the Chattahoochee.

Downstream, west of the city, Atlanta operates 5 primary wastewater treatment plants. In the proceedings of the 1966 conference, it was reported these plants discharged 564,360 population equivalents (PE) of oxygen-demanding materials. A review of the operating reports for these 5 treatment facilities for the first 11 months of 1969 (see Table II) revealed these plants discharged an average of 103,650 lbs. BOD_5/day or 610,000 PE. The flow from these five plants totaled 88.7 mgd for an average day. A distressing but significant factor shown by these reports is that the R. M. Clayton Water Pollution Control Plant received an average daily flow of 75.8 million gallons -- of which on an average day 35.1 million gallons received primary treatment, but 40.7 million gallons were bypassed untreated to the Chattahoochee River.

This extensive pollution of the Chattahoochee River by the metropolitan area renders it unsatisfactory for most water uses for at least 40 miles below Atlanta. The annual average for the dissolved oxygen concentration at any given station downstream of Atlanta was 5 mg/l or more, but in the hot, dry, low-flow months of August, September and October, the Chattahoochee was in near septic conditions for a reach of approximately 30 miles below the city. In the first 14 miles below Atlanta, fecal coliform concentrations in the river resemble those found in primary treatment plant effluents. The geometric mean exceeded 1,000,000 MPN/100 ml in this area of the river for 1968 and 1969.

Quality of flow and other variables influence the quality of the Chattahoochee. Consequently, Table III provides mean daily streamflows in the reaches above and below Atlanta.

Moving downstream to the West Point, Georgia-Lanett, Alabama area, a sampling station was established at the West Point water intake in cooperation with the USGS. The geometric mean for fecal coliform was 3,400 MPN/100 ml and 3,500 MPN/100 ml, respectively, for 1968 and 1969. However, several samples had fecal coliform concentrations in the range of 30,000 MPN/100 ml, which reflect the massive bacterial pollution upstream. Other parameters checked at this station revealed relatively good quality.

As the result of excellent participation and cooperation by the city of Columbus Water Works, an extensive monitoring network extending from Bartletts Ferry Dam to Seaboard Airline Railroad Bridge, which is located at the upper portion of Walter F. George Reservoir, was established in early 1968 (see Table I).

An evaluation of the data compiled through our joint efforts reflects excellent quality upstream of the

Columbus area. Wastewater treatment plant effluents together with urban runoff caused high fecal coliform concentrations in the Chattahoochee, especially downstream of the Columbus primary plant which is located south of the city.

At the sampling station farthest downstream in the Columbus program, Seaboard Airline RR (RM 120), the river is approaching the Walter F. George Reservoir at this point. The fecal coliform concentrations there were 1,300 MPN/100 ml and 3,200 MPN/100 ml for 1968 and 1969, respectively, reflecting the bacterial pollution from the Columbus area. However, occasional values were in the range of 100,000 MPN/100 ml, reflecting the bacterial pollution from the Columbus area. This emphasizes the need for secondary treatment and disinfection of all domestic wastes.

In summary, we can state that the Chattahoochee River above Atlanta is generally of high quality with occasional high bacterial populations. Downstream of Atlanta, the river is grossly polluted by oxygen-demanding materials which cause serious oxygen depletion for approximately 30 miles. The magnitude of bacterial pollution from the Atlanta area is so great it adversely affects water quality downstream to the West Point, Georgia-Lanett, Alabama area.

Upstream of Columbus wastewater discharges, the Chattahoochee is again of high quality. Lack of adequate treatment and disinfection of all wastes from the Columbus area creates excessively high bacterial populations downstream to the headwaters of Walter F. George Reservoir.

All of the data that I have referred to in my summary have been tabulated and are submitted together with my statement for the record.

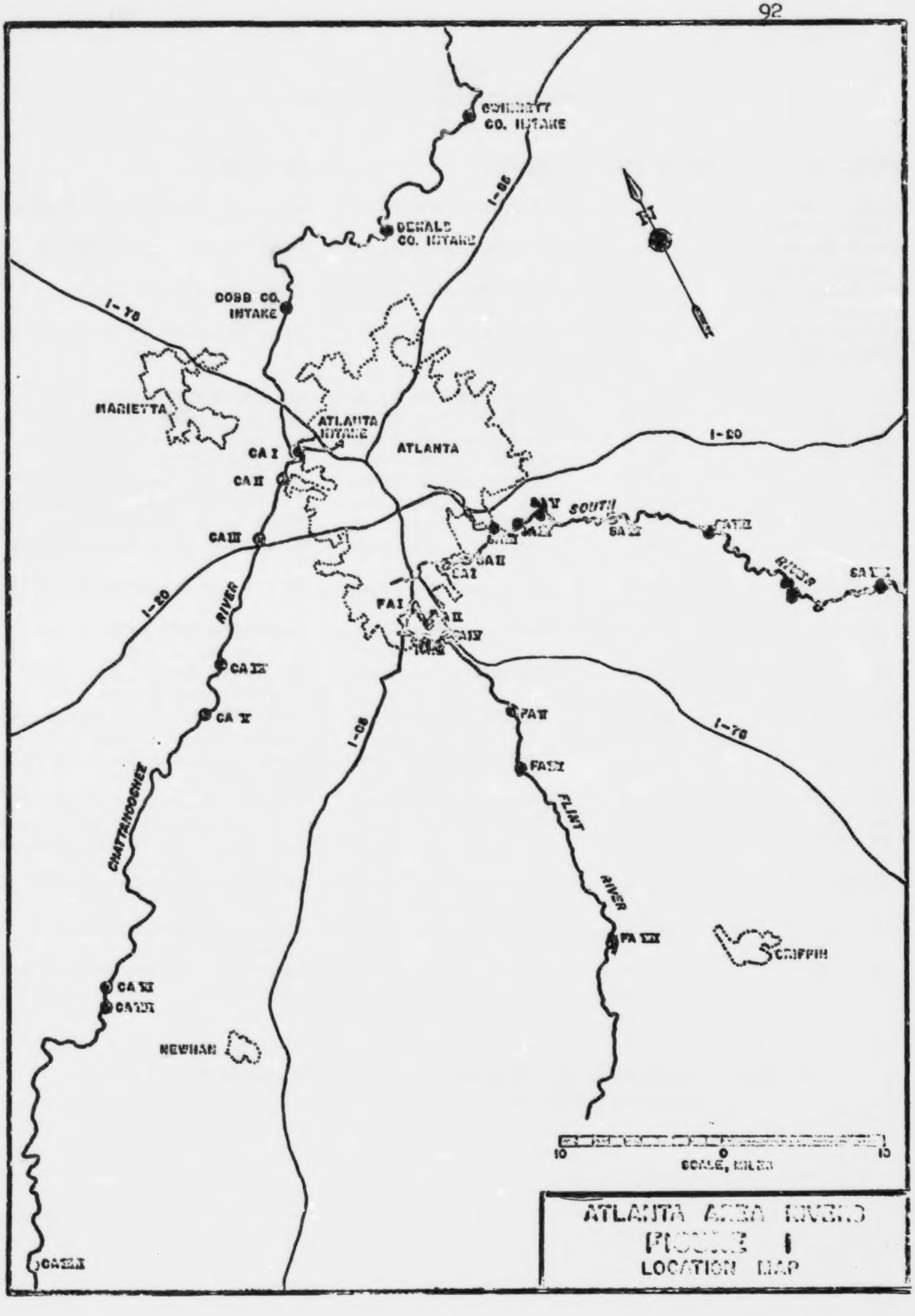
MR. STEIN: Without objection, it will be entered in the record as if read.

(The above-mentioned data follow.)

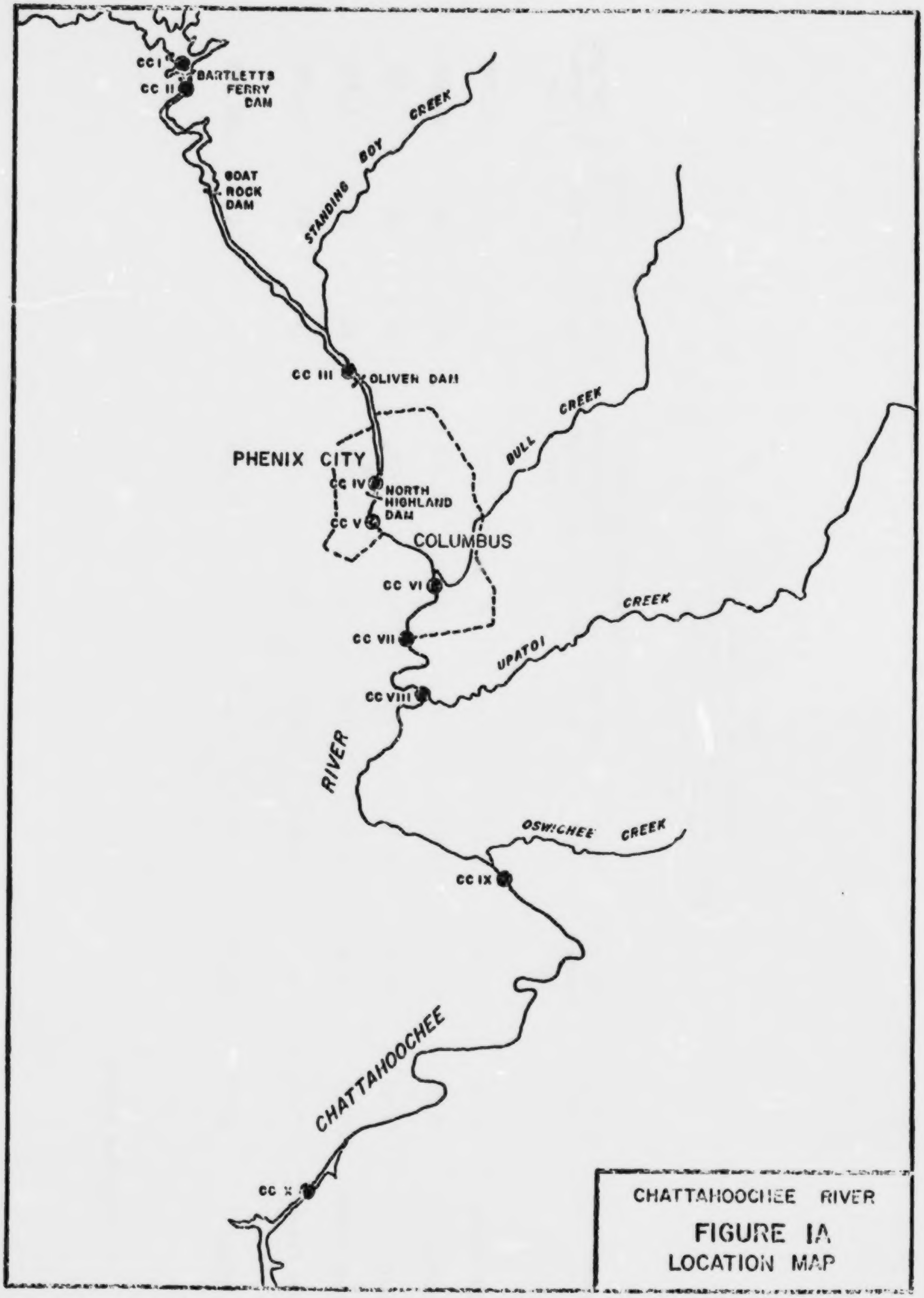
TABLE I
SAMPLING STATION DESCRIPTIONS

STATION NO.	RIVER MILE*	STREAM	LOCATION
Gwinnett Water Works Intake	-	Chattahoochee River	Gwinnett Water Works Intake
DeKalb Water Works Intake	-	Chattahoochee River	DeKalb Water Works Intake
Cobb Water Works Intake	-	Chattahoochee River	Cobb Water Works Intake
Atlanta Water Works Intake	-	Chattahoochee River	Atlanta Water Works Intake
CA I	299.8	Chattahoochee River	Atlanta Water Works Intake
CA II	298.0	Chattahoochee River	Ga. Hwy. 280 - Access Road
CA III	295.1	Chattahoochee River	Ga. Hwy. 139 - Gordon Road
CA IV	286.5	Chattahoochee River	Georgia Highway 166
CA V	281.8	Chattahoochee River	Ga. Hwy. 92, near Fairburn
CA VI	260.0	Chattahoochee River	Ga. Hwy. 16, near Whitesburg
CA VII	257.8	Chattahoochee River	Plant Yates, near Newnan
CA VIII	234.7	Chattahoochee River	U. S. Hwy. 27, near Franklin
USGS 2-3395	198.9	Chattahoochee River	West Point Water Works Intake
CC I	177.4	Chattahoochee River	Bartletts Ferry Dam - Just upstream of dam
CC II	177.4	Chattahoochee River	Bartletts Ferry Dam - Just downstream of dam
CC III	163.2	Chattahoochee River	Lake Oliver - City of Columbus Water Works Intake
CC IV	162.5	Chattahoochee River	North Highland Dam - Just above dam
CC V	159.9	Chattahoochee River	Central of Georgia RR Bridge
CC VI	157.2	Chattahoochee River	Just downstream of Bull Creek
CC VII	155.7	Chattahoochee River	Just south of Columbus sewage treatment plant
CC VIII	150.8	Chattahoochee River	At confluence with Upatoi Creek
CC IX	141.6	Chattahoochee River	Just below confluence with Oswichee Creek
CC X	120.0	Chattahoochee River	Seaborard Airline RR Bridge at Omaha

* NOTE: River miles are referenced to Flint-Chattahoochee River confluence (Jim Woodruff Dam).


GWINNETT CO. INTAKE
DEKALB CO. INTAKE
COBB CO. INTAKE
I-85
I-75
MARIETTA
ATLANTA INTAKE
ATLANTA
CA I
CA II
CA III
I-20
RIVER
CA IV
CA V
CHATTAHOOCHEE
I-85
CA VI
CA VII
NEWNAN
CA VIII
SA V
SOUTH
RIVER
CA I
CA II
FA I
FA II
FA II
FLINT
RIVER
I-75
GRIFFIN
N
10
0
10
SCALE, MILES

ATLANTA AREA RIVERS
FIGURE 1
LOCATION MAP


CC I
BARTLETTS
FERRY
DAM
CC II
BOAT
ROCK
DAM
STANDING BOY CREEK
CC III
OLIVER DAM
PHENIX CITY
CC IV
NORTH
HIGHLAND
DAM
CC V
COLUMBUS
BULL CREEK
CC VI
CC VII
UPATOI CREEK
CC VIII
RIVER
OSWICHEE CREEK
CC IX
CHATTAHOOCHEE
CC X

CHATTAHOOCHEE RIVER

FIGURE IA

LOCATION MAP

TABLE II
SUMMARY OF LOADINGS, 1969
MAJOR WASTEWATER TREATMENT FACILITIES
CHATTAHOOCHEE RIVER BASIN
Atlanta Area

Plant	Influent mgd	Influent Treated mgd	Bypass mgd	Total Suspended Solids			BOD_5		
				Influent ppm	Daily % Removal	Discharged To Stream[1] #/day	Influent ppm	Daily % Removal	Discharged To Stream[1] #/day
Camp Creek	3.11	2.98	0.13	146	57	1,700	107	37	1,790
Clayton	75.81	35.12	40.69	171	54	80,060	177	32	94,610
Fulco	0.69	0.69	0.00	210	53	570	197	35	730
Sandy Creek	2.07	1.96	0.11	145	52	1,250	152	34	1,720
Utoy Creek	7.06	6.25	0.81	176	69	4,010	142	48	4,800
TOTALS	88.74	47.00	41.74	-	-	87,590	-	-	103,650

[1] Includes bypass

TABLE III
CHATTAHOOCHEE RIVER STREAMFLOWS IN CFS

DATE	USGS STA. 2-3360 (near CA I) Paces Ferry Rd., Atlanta	USGS STA. 2-3371.7 (CA V) Ga. Hwy. 92	USGS STA. 2-3380 (CA VI) Ga. Hwy. 16
3/27/68	4,400	5,600	6,050
4/04/68	2,300	3,110	3,570
5/22/68	3,590	4,720	5,190
6/13/68	3,560	4,080	4,250
7/17/68	3,270	3,550	3,780
8/28/68	4,600	4,830	4,560
9/25/68	4,030	4,060	3,980
10/14/68	1,200	1,500	1,410
11/13/68	1,890	2,530	2,880
12/04/68	1,900	3,630	3,790
1/06/69	1,180	1,660	1,910
2/19/69	1,690	2,700	3,210
3/03/69	1,200	1,900	2,240
4/02/69	3,230	3,940	4,080
5/05/69	1,830	2,040	2,200
6/26/69	3,610	3,720	3,570
7/16/69	3,920	4,240	4,110
8/04/69	1,430	1,790	1,830
9/10/69	2,300	2,850	2,810
10/15/69	1,340*	-	1,300*
11/12/69	5,450*	-	-

* Unpublished data, subject to revision

GWINNETT COUNTY WATER INTAKE
CHATTAHOOCHEE RIVER

DATE	TEMP. °C	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1 as $CaCO_3$	HARDNESS mg/1 as $CaCO_3$	SOLIDS mg/1		SPEC. COND. umho/cm 25°	Cl mg/1	COLIFORM MPN/100 ml	
							Diss.	Total			Total	Fecal
3/05/69	6.0	12.1	0.5	7.0	12	7	19	20	30	1.9	230	91
4/07/69	10.0	10.6	1.2	6.6	6	8	25	26	30	1.7	430	230
5/28/69	13.0	10.3	0.5	6.6	12	9	30	40	34	1.9	930	73
7/24/69	13.0	8.7	0.4	6.1	9	11	32	49	32	1.6	9,300	9,300
11/17/69	8.0	8.5	0.6	6.1	10	10	37	51	33	1.3	430	91

DATE	TURB. JCU	COLOR APHA Units		SO_4 mg/1	PO_4 (total) mg/1	$NO_3(N)$ mg/1	$NH_3(N)$ mg/1	Ca mg/1	IRON (total) mg/1	Mg mg/1	Mn mg/1	SODIUM mg/1	POTASSIUM mg/1	SILICA SiO_2 mg/1
		True	App.											
3/05/69	4	5	10	<2	<0.05	0.05	<0.1	2.1	0.2	0.7	<0.05	2.0	1.1	4.9
4/07/69	4	5	-	<2	<0.05	0.20	<0.1	2.3	0.1	0.8	<0.05	2.1	1.1	5.4
5/28/69	4	15	-	<2	<0.05	0.15	<0.1	2.3	0.2	0.8	<0.05	1.9	1.2	5.2
7/24/69	18	10	-	3	0.11	0.28	<0.1	2.0	0.4	0.7	<0.05	1.9	1.2	6.0
11/17/69	13	10	-	<2	0.08	0.14	<0.1	2.3	1.2	0.9	0.14	1.9	1.2	7.8

DEKALB COUNTY WATER INTAKE
CHATTAHOOCHEE RIVER

DATE	TEMP. °C	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1 as $CaCO_3$	HARDNESS mg/1 as $CaCO_3$	SOLIDS mg/1		SPEC. COND. umho/cm 25°	Cl mg/1	COLIFORM MPN/100 ml	
							Diss.	Total			Total	Fecal
3/05/69	7.0	11.6	0.8	6.8	11	8	17	18	33	1.9	430	230
4/07/69	13.5	10.1	1.0	6.6	13	10	31	33	35	2.2	4,300	230
5/28/69	13.0	10.4	1.6	6.5	12	9	47	54	40	2.9	4,300	2,300
7/24/69	14.0	8.2	0.5	6.1	10	12	32	50	34	1.8	15,000	4,300
11/17/69	8.0	8.7	0.9	6.6	14	12	33	39	43	1.4	4,300	430

DATE	TURB. JCU	COLOR APHA Units		SO_4 mg/1	PO_4 (total) mg/1	NO_3(N) mg/1	NH_3(N) mg/1	Ca mg/1	IRON (total) mg/1	Mg mg/1	Mn mg/1	SODIUM mg/1	POTASSIUM mg/1	SILICA SiO_2 mg/1
		True	App.											
3/05/69	6	5	15	<2	0.10	0.05	<0.1	2.4	0.3	0.7	<0.05	2.3	1.1	4.0
4/07/69	9	9	-	<2	0.05	0.25	0.3	2.8	0.5	0.9	<0.05	2.6	1.1	6.8
5/28/69	5	15	-	<2	0.05	0.15	0.2	2.4	0.2	0.8	<0.05	2.5	1.4	5.0
7/24/69	36	20	-	3	0.11	0.26	<0.1	2.2	0.7	0.8	<0.05	2.0	1.3	6.0
11/17/69	8	10	-	<2	0.09	0.16	<0.1	3.1	0.7	1.0	0.05	3.1	1.2	8.5

COBB COUNTY WATER INTAKE
CHATTAHOOCHEE RIVER

DATE	TEMP. °C	D.O. mg/l	BOD mg/l	pH	ALKALINITY (total) mg/l as $CaCO_3$	HARDNESS mg/l as $CaCO_3$	SOLIDS mg/l		SPEC. COND. umho/cm 25°	Cl mg/l	COLIFORM MPN/100 ml	
							Diss.	Total			Total	Fecal
3/05/69	7.0	11.8	0.7	6.9	13	9	26	27	34	1.8	930	930
4/07/69	15.0	10.0	1.2	6.7	14	11	38	52	40	3.2	4,300	930
5/28/69	14.0	9.9	0.3	6.3	11	9	37	64	33	1.6	2,300	230
7/24/69	15.5	8.3	0.8	6.2	10	10	32	56	32	1.6	21,000	15,000
11/17/69	8.5	9.7	0.9	6.6	12	11	32	37	37	2.0	4,300	390

DATE	TURB. JCU	COLOR APHA Units		SO_4 mg/l	PO_4 (total) mg/l	NO_3(N) mg/l	NH_3(N) mg/l	Ca mg/l	IRON (total) mg/l	Mg mg/l	Mn mg/l	SODIUM mg/l	POTASSIUM mg/l	SILICA SiO_2 mg/l
		True	App.											
3/05/69	8	5	20	<2	0.10	0.05	<0.1	2.2	0.4	0.3	0.07	2.3	1.1	6.3
4/07/69	17	20	-	<2	0.10	0.25	<0.1	3.0	0.8	1.0	<0.05	3.1	1.2	7.0
5/28/69	17	15	-	<2	0.07	0.20	<0.1	2.1	0.3	0.8	<0.05	1.9	1.2	5.0
7/24/69	34	30	-	3	0.12	0.25	<0.1	2.0	0.7	0.8	<0.05	1.8	1.2	5.8
11/17/69	6	10	-	<2	0.26	0.16	<0.1	2.5	0.4	0.9	0.05	2.4	1.3	6.2

ATLANTA WATER INTAKE
CHATTAHOOCHEE RIVER

DATE	TEMP. °C	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1 as $CaCO_3$	HARDNESS mg/1 as $CaCO_3$	SOLIDS mg/1		SPEC. COND. umho/cm 25°	Cl mg/1	COLIFORM MPN/100 ml	
							Diss.	Total			Total	Fecal
3/05/69	6.0	11.9	0.7	6.9	14	11	31	32	44	2.5	2,300	430
4/07/69	15.5	10.2	1.4	6.8	14	10	45	81	36	2.6	2,300	430
5/28/69	18.0	9.4	0.4	6.8	9	10	35	-	40	-	33,000	<2,000
11/17/69	9.0	9.7	0.3	6.7	12	10	24	30	36	1.7	15,000	1,500

DATE	TURB. JCU	COLOR APHA Units		SO_4 mg/1	PO_4 (total) mg/1	$NO_3(N)$ mg/1	$NH_3(N)$ mg/1	Ca mg/1	IRON (total) mg/1	Mg mg/1	Mn mg/1	SODIUM mg/1	POTASSIUM mg/1	SILICA SiO_2 mg/1
		True	App.											
3/05/69	8	10	25	<2	0.22	0.06	<0.1	2.8	0.6	1.0	0.08	3.0	1.2	7.9
4/07/69	32	22	-	<2	0.25	0.35	<0.1	2.8	1.0	1.0	<0.05	2.8	1.2	6.8
5/28/69	17	15	-	<2	0.07	0.20	<0.1	2.1	0.3	0.8	<0.05	1.9	1.2	5.0
11/17/69	6	10	-	<2	0.26	0.16	<0.1	2.5	0.4	0.9	0.05	2.4	1.3	6.2

CHATTAHOOCHEE RIVER
CA I - ATLANTA WATER WORKS INTAKE

DATE	TEMP. °C	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1 as $CaCO_3$	SOLIDS mg/1 Dissolved	SOLIDS mg/1 Total	COLIFORM MPN/100 ml Total	COLIFORM MPN/100 ml Fecal
3/27/68	10	10.0	4.0	7.5	24	64	80	93,000	43,000
4/04/68	11	9.5	2.7	7.4	26	40	52	46,000	9,300
5/22/68	10	9.4	2.4	7.1	23	64	105	21,000	15,000
6/13/68	17	8.2	8.2	7.3	24	34	91	2,100,000	750,000
7/17/68	18	8.7	1.4	7.7	19	-	-	7,500	2,300
8/28/68	22	8.8	1.2	7.1	9	-	-	7,500	3,900
9/25/68	15	8.6	1.6	6.5	9	40	52	2,300	430
10/14/68	17	8.3	2.2*	8.4	12	-	-	2,300	930
11/13/68	8	10.8	2.0	7.8	12	54	68	23,000	23,000
12/04/68	10	10.5	3.8	8.3	19	-	-	43,000	9,300
ARITH. AVG.	14	9.3	3.0	-	18	49	75	230,000	86,000
GEO. MEAN								24,000	9,000
1/06/69	5	12.3	2.2*	7.3	7	-	-	230	91
2/19/69	5	11.4	4.2	7.5	16	102	123	930	930
3/03/69	9	9.0	1.2*	7.8	14	-	-	2,300	2,300
4/02/69	13	12.3	6.7	6.5	12	35	70	2,300	230
5/05/69	14	9.0	1.6*	7.9	14	34	45	2,300	930
6/26/69	19	8.5	0.7	7.9	64	24	75	4,300	430
7/16/69	16	9.1	2.2	8.1	7	48	126	4,300	2,300
8/04/69	17	8.6	0.9	8.3	64	-	-	750,000	4,300
9/10/69	18	8.6	1.8	7.8	24	64	70	43,000	4,300
10/15/69	16	8.8	2.0	7.8	24	-	-	9,300	1,500
11/12/69	15	8.7	1.8	8.0	33	46	70	430	230
ARITH. AVG.	13	9.7	2.5	-	25	50	83	74,000	1,600
GEO. MEAN								4,100	890

* 4 Day BOD

CHATTAHOOCHEE RIVER
CA II - Georgia Highway 280

DATE	TEMP. °C	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1 as $CaCO_3$	SOLIDS mg/1 Dissolved	SOLIDS mg/1 Total	COLIFORM MPN/100 ml Total	COLIFORM MPN/100 ml Fecal
3/27/68	10	10.7	3.7	7.7	14	80	108	430,000	230,000
4/04/68	11	8.8	8.5	7.0	26	32	44	2,400,000	930
5/22/68	16	9.1	7.7	7.0	19	64	137	4,600,000	2,400,000
6/13/68	19	9.0	2.6	7.4	24	-	-	2,400,000	93,000
7/17/68	21	8.1	5.5	6.9	19	-	-	11,000,000	11,000,000
8/28/68	15	8.8	1.8	7.5	-	-	-	430,000	93,000
9/25/68	19	9.0	1.2	6.7	12	48	69	230,000	230,000
10/14/68	20	7.8	4.2*	8.2	19	-	-	4,600,000	390,000
11/13/68	12	9.6	4.5	8.0	12	30	49	4,300	4,300
12/04/68	12	9.5	4.5	7.9	26	141	179	12,000	4,300
ARITH. AVG.	16	9.0	4.4	-	19	66	98	2,600,000	1,400,000
GEO. MEAN								560,000	98,000
1/06/69	10	11.5	2.8*	7.0	14	-	-	3,900	430
2/19/69	9	10.4	9.0	7.2	21	122	150	2,400,000	230,000
3/03/69	15	8.4	8.0*	7.4	35	38	185	11,000,000	430,000
4/02/69	14	11.6	3.0	7.0	12	38	137	430,000	230,000
5/05/69	22	7.0	4.0*	7.7	35	46	74	210,000	150,000
6/26/69	21	8.3	2.8	7.6	50	42	99	93,000	43,000
7/16/69	19	8.3	2.8	8.1	14	54	103	2,400,000	430,000
8/04/69	25	6.9	3.0	7.7	45	38	148	43,000	9,300
9/10/69	22	6.4	8.3	7.8	19	76	168	2,100,000	1,500,000
10/15/69	24	5.7	12.0	8.2	26	-	-	230,000	230,000
11/12/69	14	8.4	5.5	8.3	14	46	122	390,000	43,000
ARITH. AVG.	18	8.4	5.8	-	26	56	132	1,800,000	300,000
GEO. MEAN								370,000	91,000

* 4 Day BOD

CHATTAHOOCHEE RIVER
CA III - Georgia Highway 139

DATE	TEMP. °C	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1 as $CaCO_3$	SOLIDS mg/1		COLIFORM MPN/100 ml	
						Dissolved	Total	Total	Fecal
3/27/68	10	10.3	5.0	7.6	14	56	118	230,000	230,000
4/04/68	12	8.0	7.2	7.0	24	68	76	4,600,000	4,600,000
5/22/68	16	8.4	6.4	7.0	19	68	111	230,000	93,000
6/13/68	18	8.1	5.0	7.4	19	24	83	2,400,000	930,000
7/17/68	22	7.6	3.4	6.7	17	-	-	1,500,000	930,000
8/28/68	16	8.0	3.4	7.0	17	26	54	>11,000,000	>11,000,000
9/25/68	18	7.8	5.4	6.7	17	60	86	430,000	230,000
10/14/68	22	4.4	9.7*	8.0	19	32	63	>11,000,000	11,000,000
11/13/68	12	8.2	13.7	7.5	21	34	73	11,000,000	2,400,000
12/04/68	13	8.0	11.7	7.9	26	34	160	4,600,000	750,000
ARITH. AVG.	16	7.9	6.8	-	19	45	92	4,700,000	3,200,000
GEO. MEAN								2,200,000	1,200,000
1/06/69	8	8.9	12.0*	7.3	31	-	-	11,000,000	1,500,000
2/19/69	10	8.6	14.3	7.1	24	134	187	11,000,000	1,500,000
3/03/69	13	7.8	7.7*	7.2	24	44	75	2,400,000	930,000
4/02/69	17	8.5	12.3	6.9	24	46	169	>11,000,000	93,000
5/05/69	22	5.3	7.0*	7.5	26	48	74	>11,000,000	280,000
6/26/69	22	6.1	13.1	7.3	38	42	196	>11,000,000	>11,000,000
7/16/69	20	7.6	6.0	7.4	14	44	105	2,100,000	430,000
8/04/69	24	5.0	4.6	7.8	40	44	96	11,000,000	2,400,000
9/10/69	21	4.1	10.6	7.5	24	70	94	11,000,000	4,600,000
10/15/69	23	1.3	12.6	7.6	42	30	74	>11,000,000	11,000,000
11/12/69	14	7.5	8.6	8.3	28	68	210	930,000	150,000
ARITH. AVG.	18	6.4	10.3	-	29	57	128	8,500,000	3,100,000
GEO. MEAN								6,600,000	1,200,000

* 4 Day BOD

CHATTAHOOCHEE RIVER
CA IV - Georgia Highway 166

DATE	TEMP. °C	D.O. mg/l	BOD mg/l	pH	ALKALINITY (total) mg/l as $CaCO_3$	SOLIDS mg/l		COLIFORM MPN/100 ml	
						Dissolved	Total	Total	Fecal
3/27/68	11	9.0	4.5	7.2	17	56	152	1,500,000	750,000
4/04/68	12	7.9	6.1	6.8	19	72	80	2,400,000	2,400,000
5/22/68	16	6.6	7.0	6.8	24	112	160	1,500,000	430,000
6/13/68	20	6.0	6.8	7.2	17	28	105	4,600,000	4,600,000
7/17/68	21	4.1	6.3	6.5	19	74	145	4,600,000	2,400,000
8/28/68	17	6.5	4.5	6.7	17	20	59	>11,000,000	1,500,000
9/25/68	19	4.7	8.2	6.8	17	86	119	>11,000,000	2,400,000
10/14/68	22	1.3	6.6*	7.6	19	32	57	2,400,000	930,000
11/13/68	9	9.9	8.3	7.3	21	42	64	1,500,000	1,500,000
12/04/68	17	7.0	10.3	7.5	24	42	183	1,500,000	230,000
ARITH. AVG.	16	6.3	6.9	-	19	56	112	4,200,000	1,700,000
GEO. MEAN								3,100,000	1,300,000
1/06/69	6	9.4	10.3*	7.1	38	-	-	930,000	430,000
2/19/69	10	6.8	12.6	7.1	26	134	193	750,000	750,000
3/03/69	12	5.0	8.0*	7.1	26	46	95	2,400,000	930,000
4/02/69	15	8.3	5.7	7.0	21	40	78	4,600,000	750,000
5/05/69	21	3.8	5.4*	7.1	26	48	61	930,000	230,000
6/26/69	22	3.5	6.3	7.5	40	48	75	2,400,000	430,000
7/16/69	20	5.0	4.3	7.5	19	80	110	11,000,000	4,600,000
8/04/69	22	2.1	4.3	7.5	64	33	76	2,400,000	2,400,000
9/10/69	19	4.3	6.6	7.4	28	64	92	4,600,000	930,000
10/15/69	22	0.9	10.3	7.6	28	-	-	4,600,000	4,600,000
11/12/69	15	6.7	11.4	7.7	35	72	300	4,600,000	230,000
ARITH. AVG.	17	5.1	7.7	-	32	63	120	3,600,000	1,500,000
GEO. MEAN								2,600,000	880,000

* 4 Day BOD

CHATTAHOOCHEE RIVER
CA V - Georgia Highway 92

DATE	TEMP. °C	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1 as $CaCO_3$	HARDNESS mg/1 as $CaCO_3$	SOLIDS mg/1		SPEC. COND. umho/cm 25°	Cl mg/1	COLIFORM MPN/100 ml	
							Diss.	Total			Total	Fecal
3/27/68	11	8.8	4.6	7.3	19	12	64	118	47	3.5	2,400,000	930,000
4/04/68	13	7.1	7.5	6.8	24	16	40	98	65	2.5	930,000	930,000
5/22/68	15	6.2	6.6	5.9	21	18	-	-	58	5.0	2,100,000	2,100,000
6/13/68	20	5.8	5.7	5.8	21	14	-	-	68	4.6	430,000	430,000
7/17/68	22	3.5	7.1	6.3	24	16	-	-	74	3.0	4,600,000	1,500,000
8/28/68	17	1.0	5.1	6.7	19	16	-	-	52	5.0	2,400,000	930,000
9/25/68	20	4.5	6.3	6.9	19	16	58	72	66	4.0	4,600,000	930,000
10/14/68	22	0.9	4.3*	7.3	35	18	-	-	99	6.0	1,500,000	1,500,000
11/13/68	10	8.5	9.1	7.3	19	15	-	-	64	4.5	430,000	230,000
12/04/68	18	6.8	12.3	7.3	-	19	-	-	94	6.2	930,000	930,000
ARITH. AVG.	17	5.3	7.1	-	22	16	54	96	69	4.4	2,000,000	1,000,000
GEO. MEAN											1,500,000	890,000
1/06/69	6	8.7	11.8*	7.1	24	20	-	-	97	7.1	4,600,000	4,600,000
2/19/69	9	7.8	7.8	7.0	21	17	-	-	78	4.3	230,000	43,000
3/03/69	11	5.8	6.0*	7.0	19	18	-	-	79	4.4	11,000,000	230,000
4/02/69	14	8.1	5.5	7.2	19	16	41	81	68	3.8	930,000	430,000
5/05/69	21	3.1	4.3*	7.1	26	21	54	84	91	5.4	>11,000,000	4,600,000
6/26/69	24	3.9	4.8	7.2	-	15	44	66	75	4.7	4,600,000	2,400,000
7/16/69	19	5.3	3.0	7.4	24	-	72	201	-	-	11,000,000	2,100,000
8/04/69	23	2.2	4.3	6.4	24	28	42	75	96	6.0	930,000	930,000
9/10/69	20	4.4	5.3	7.3	28	13	52	82	61	3.8	4,600,000	430,000
10/15/69	22	0.5	14.5	7.4	33	23	-	-	122	9.4	11,000,000	4,600,000
11/12/69	14	6.6	6.8	6.5	15	11	-	-	48	3.0	11,000,000	1,500,000
ARITH. AVG.	17	5.1	6.5	-	23	18	51	98	82	5.2	6,400,000	2,000,000
GEO. MEAN											3,900,000	1,000,000

* 4 Day BOD

CHATTAHOOCHEE RIVER
CA V - Georgia Highway 92

DATE	TURB. JCU	COLOR APHA Units True	COLOR APHA Units App.	SO_4 mg/1	PO_4 (total) mg/1	$NO_3(N)$ mg/1	$NH_3(N)$ mg/1	Ca mg/1	IRON (total) mg/1	Mg mg/1	Mn mg/1	SODIUM mg/1	POTASSIUM mg/1	SILICA SiO_2 mg/1
3/27/68	19	15	165	8	0.85	0.28	0.7	3.0	0.4	1.0	0.06	4.2	1.4	5.9
4/04/68	14	30	130	4	1.00	0.20	0.6	3.8	0.7	1.4	0.10	5.3	1.6	1.3
5/22/68	24	30	330	<2	0.95	0.46	0.6	4.5	0.6	0.9	0.10	5.0	1.9	7.5
6/13/68	28	45	350	4	1.20	0.36	1.5	4.9	1.1	1.1	0.05	1.2	2.0	12.0
7/17/68	76	120	425	4	1.00	0.42	0.9	4.1	2.6	1.2	0.10	6.3	2.2	7.1
8/28/68	21	50	230	2	0.95	0.36	0.4	2.7	0.5	0.8	<0.05	4.5	1.6	5.2
9/25/68	20	30	155	2	1.15	0.30	0.8	3.9	0.5	1.0	0.50	5.9	1.6	6.5
10/14/68	14	45	130	5	1.40	0.10	0.3	5.3	0.7	1.2	0.06	7.5	2.6	7.8
11/13/68	31	155	330	4	1.95	0.25	1.2	4.4	1.1	1.0	0.05	7.0	1.6	10.8
12/04/68	97	140	1350	4	0.95	0.52	0.1	5.5	3.2	1.1	0.19	4.5	1.4	10.4
ARITH. AVG. GEO. MEAN	34	66	360	4	1.14	0.33	0.7	4.2	1.1	1.1	0.13	5.1	1.8	7.4
1/06/69	16	20	40	6	2.15	0.40	3.2	5.0	0.5	1.4	0.07	9.5	2.0	11.3
2/19/69	26	15	40	7	1.35	0.20	1.0	4.6	1.0	1.2	0.10	7.0	1.6	10.8
3/03/69	30	25	40	3	1.45	0.16	1.0	4.8	0.8	1.3	<0.05	6.4	1.7	10.3
4/02/69	21	20	-	7	0.90	0.30	0.3	4.6	0.6	1.1	0.05	4.9	1.5	8.0
5/05/69	22	15	-	6	1.40	0.16	<0.1	5.4	0.9	1.6	<0.05	6.2	2.0	9.5
6/26/69	20	10	-	8	0.88	0.20	0.6	4.0	0.6	0.8	0.16	6.2	1.5	8.0
7/16/69	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/04/69	52	-	-	8	0.37	0.38	1.2	6.6	1.6	1.4	0.08	6.5	2.5	9.3
9/10/69	25	25	-	7	0.68	0.27	0.6	3.2	1.0	0.9	0.17	5.0	1.7	8.5
10/15/69	15	25	-	12	1.50	0.24	1.4	6.1	2.0	1.4	0.50	10.0	2.8	11.0
11/12/69	32	25	-	4	1.50	0.21	0.3	3.1	2.4	1.0	0.06	3.6	2.0	3.8
ARITH. AVG. GEO. MEAN	31	20	40	7	1.22	0.33	1.0	4.7	1.1	1.2	0.13	6.5	1.9	9.0

* 4 Day BOD

CHATTAHOOCHEE RIVER
CA VI - Georgia Highway 16

DATE	TEMP. °C	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1 as $CaCO_3$	SOLIDS mg/1 Dissolved	SOLIDS mg/1 Total	COLIFORM MPN/100 ml Total	COLIFORM MPN/100 ml Fecal
3/27/68	12	8.2	5.1	7.2	17	68	112	4,600,000	2,300,000
4/04/68	15	5.7	6.2	6.8	24	48	102	230,000	93,000
5/22/68	-	-	-	-	-	-	-	-	-
6/13/68	20	6.5	3.8	7.0	17	24	44	750,000	390,000
7/17/68	23	4.3	2.0	6.6	21	44	164	430,000	230,000
8/28/68	25	6.5	3.8	7.4	12	20	87	430,000	230,000
9/25/68	21	5.1	4.0	6.9	17	56	101	1,100,000	240,000
10/14/68	21	3.3	2.2*	7.2	24	32	56	230,000	230,000
11/13/68	10	7.5	7.2	7.0	19	58	130	2,400,000	230,000
12/04/68	18	4.0	12.5	7.3	31	38	273	2,100,000	430,000
ARITH. AVG.	18	5.7	5.6	-	20	43	119	1,400,000	490,000
GEO. MEAN								830,000	310,000
1/06/69	4	7.5	8.2*	7.0	24	-	-	930,000	430,000
2/19/69	8	8.0	5.5	7.0	16	126	168	230,000	93,000
3/03/69	10	5.6	2.3*	6.9	24	42	71	430,000	43,000
4/02/69	15	6.0	4.8	7.0	16	25	99	750,000	93,000
5/05/69	23	5.5	2.0*	7.1	28	44	80	230,000	15,000
6/26/69	25	3.7	3.3	7.2	45	36	85	2,400,000	430,000
7/16/69	22	4.5	2.0	7.4	31	62	131	230,000	93,000
8/04/69	23	4.0	2.3	7.4	57	-	-	230,000	93,000
9/10/69	23	2.1	5.0	6.9	24	60	100	230,000	230,000
10/15/69	21	1.7	6.8	7.5	47	66	113	930,000	230,000
11/12/69	15	6.0	5.8	7.7	26	58	123	930,000	75,000
ARITH. AVG.	17	5.0	4.4	-	31	58	108	680,000	170,000
GEO. MEAN								490,000	110,000

* 4 Day BOD

CHATTAHOOCHEE RIVER
CA VII - PLANT YATES

DATE	TEMP. °C	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1 as $CaCO_3$	SOLIDS mg/1 Dissolved	SOLIDS mg/1 Total	COLIFORM MPN/100 ml Total	COLIFORM MPN/100 ml Fecal
3/27/68	21	7.8	5.8	7.1	14	48	100	2,100,000	230,000
4/04/68	28	5.6	5.0	6.7	24	60	144	230,000	93,000
5/22/68	25	5.6	4.0	6.7	19	132	209	750,000	390,000
6/13/68	20	5.0	9.7	6.8	17	-	-	750,000	230,000
7/17/68	31	4.5	4.9	6.5	21	42	183	230,000	230,000
8/28/68	25	6.5	3.8	7.4	12	20	87	430,000	230,000
9/25/68	25	6.0	4.2	6.8	17	58	103	2,400,000	430,000
10/14/68	26	5.0	2.7*	7.0	24	-	-	930,000	21,000
11/13/68	23	5.7	7.6	6.9	24	40	100	1,500,000	230,000
12/04/68	19	4.8	10.7	7.1	24	-	-	11,000,000	930,000
ARITH. AVG.	24	5.6	6.2	-	20	57	132	2,000,000	300,000
GEO. MEAN								1,000,000	210,000
1/06/69	14	7.7	4.0*	6.9	19	-	-	930,000	430,000
2/19/69	17	8.3	5.8	6.9	16	130	180	430,000	150,000
3/03/69	17	6.2	5.1*	6.9	26	48	74	430,000	230,000
4/02/69	24	6.0	4.9	7.0	16	-	-	4,600,000	930,000
5/05/69	22	5.0	1.6*	7.0	-	44	98	230,000	43,000
6/26/69	31	4.3	-	7.0	31	44	114	230,000	23,000
7/16/69	30	4.3	2.9	7.8	19	60	170	230,000	230,000
8/04/69	28	4.1	0.2	7.0	47	44	72	4,300	930
9/10/69	30	2.9	1.3	7.1	12	60	102	430	<30
10/15/69	27	3.0	0.8	7.4	26	44	99	36	<30
11/12/69	21	6.1	5.5	7.5	14	74	124	1,500,000	290,000
ARITH. AVG.	24	5.3	3.1	-	23	61	115	780,000	210,000
GEO. MEAN								81,000	23,000

* 4 Day BOD

CHATTAHOOCHEE RIVER
CA VIII - U. S. Highway 27

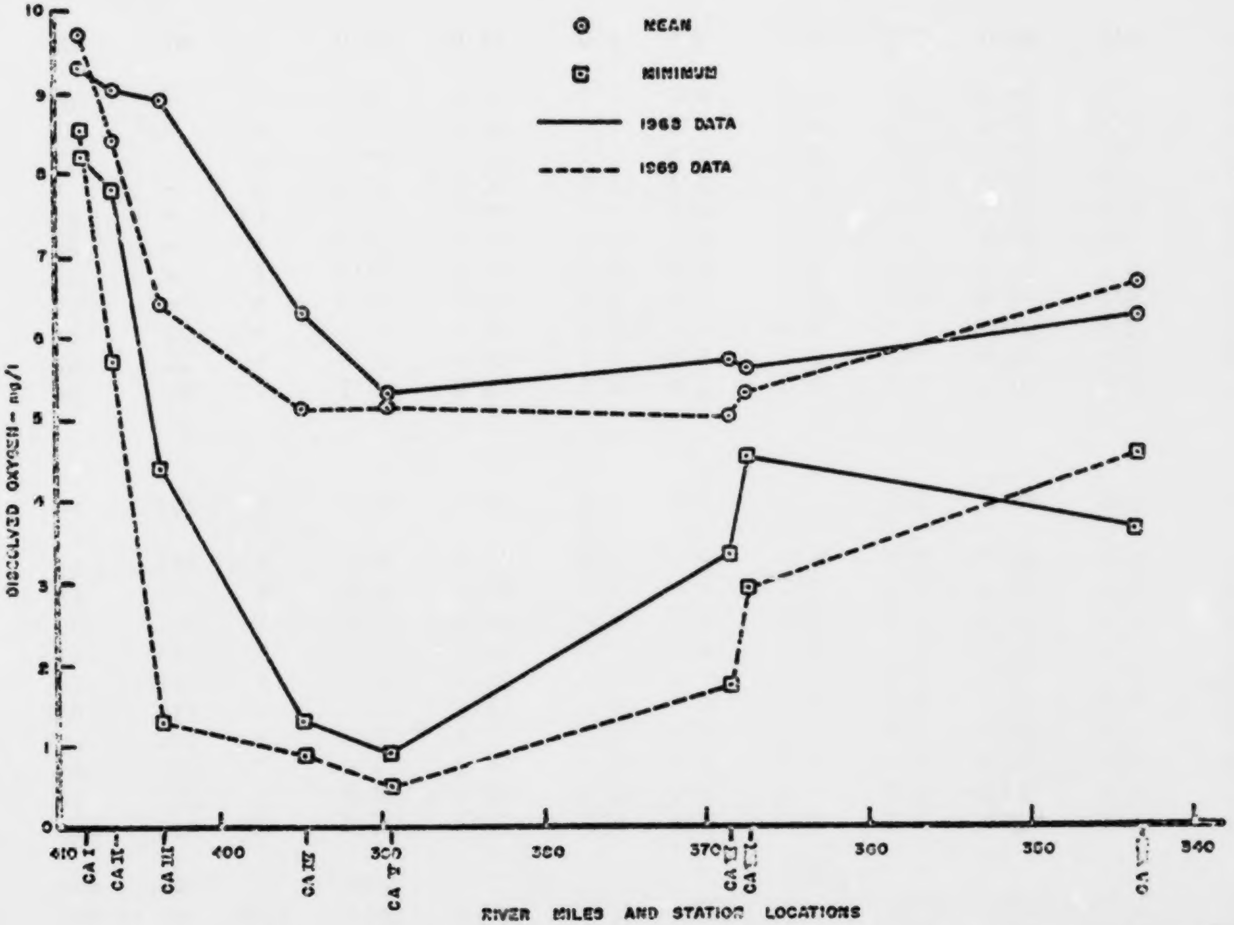
DATE	TEMP. °C	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1 as $CaCO_3$	HARDNESS mg/1 as $CaCO_3$	SOLIDS mg/1 Diss.	SOLIDS mg/1 Total	SPEC. COND. umho/cm 25°	Cl mg/1	COLIFORM MPN/100 ml Total	COLIFORM MPN/100 ml Fecal
3/27/68	16	5.5	4.0	7.1	14	14	-	-	51	4.0	4,300,000	43,000
4/04/68	17	9.6	3.6	6.8	24	18	48	122	69	3.0	230,000	7,500
5/22/68	19	5.7	4.0	6.9	26	16	-	-	65	5.0	230,000	43,000
6/13/68	25	5.8	2.7	7.0	14	14	-	-	60	3.9	230,000	23,000
7/17/68	25	4.5	2.4	6.8	24	16	-	-	70	4.0	230,000	93,000
8/28/68	25	3.6	2.0	6.9	17	18	-	-	68	6.0	430,000	93,000
9/25/68	27	4.7	2.2	7.0	12	10	64	98	67	4.0	150,000	7,500
10/14/68	22	6.8	1.6*	7.1	19	14	-	-	60	5.5	23,000	23,000
11/13/68	10	7.8	4.2	7.9	14	15	40	101	63	4.5	930,000	430,000
12/04/68	19	8.0	4.4	7.3	21	18	-	-	87	4.6	430,000	75,000
ARITH. AVG.	20	6.2	3.3	-	18	15	51	107	66	4.4	730,000	84,000
GEO. MEAN											310,000	42,000
1/06/69	5	9.8	3.8*	7.1	21	16	-	-	78	5.8	43,000	23,000
2/19/69	9	9.0	5.1	7.0	21	15	-	-	67	3.8	390,000	43,000
3/03/69	10	8.0	2.4*	7.0	24	19	48	77	72	3.5	230,000	43,000
4/02/69	17	7.0	3.3	7.1	12	15	-	-	58	3.5	120,000	43,000
5/05/69	25	7.6	1.3*	7.1	-	14	38	68	54	3.0	93,000	23,000
6/26/69	31	4.6	2.9	6.9	35	14	38	77	63	4.2	43,000	43,000
7/16/69	30	4.5	3.1	7.6	26	20	86	161	96	7.5	9,300	930
8/17/69	23	6.3	1.6	6.5	17	14	-	-	65	3.6	43,000	15,000
9/10/69	26	5.5	2.9	6.8	21	20	-	-	92	5.8	7,500	2,300
10/15/69	20	5.9	2.7	7.5	26	18	46	51	86	5.5	9,300	4,300
11/12/69	19	4.9	5.6	7.4	16	13	34	100	62	4.1	430,000	150,000
ARITH. AVG.	20	6.6	3.4	-	22	16	48	89	72	4.6	130,000	36,000
GEO. MEAN											57,000	17,000

* 4 Day BOD

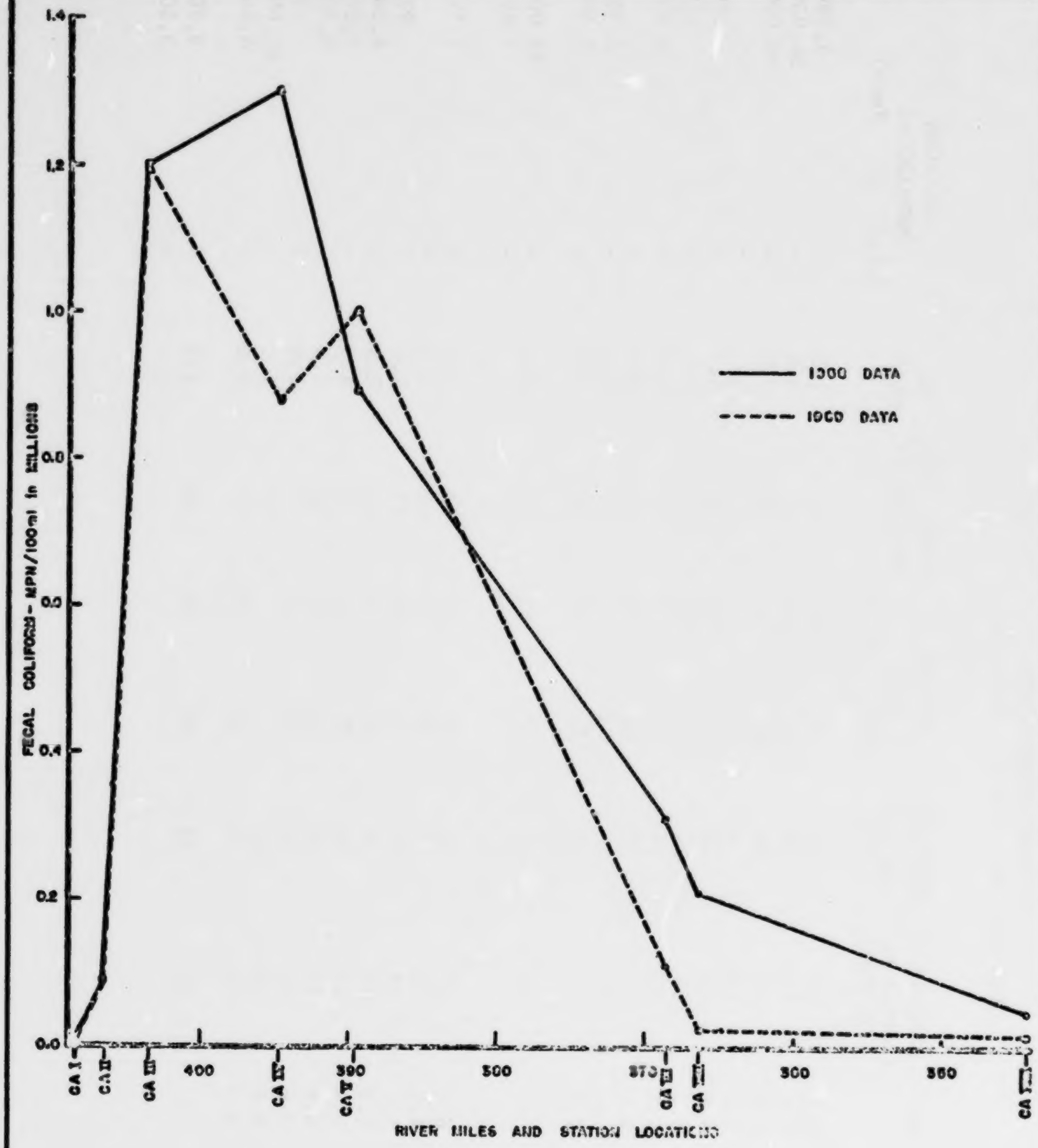
CHATTAHOOCHEE RIVER
CA VIII - U. S. Highway 27

DATE	TURB. JCU	COLOR APHA Units		SO_4 mg/1	PO_4 (total) mg/1	$NO_3(N)$ mg/1	$NH_3(N)$ mg/1	Ca mg/1	IRON (total) mg/1	Mg mg/1	Mn mg/1	SODIUM mg/1	POTASSIUM mg/1	SILICA SiO_2 mg/1
		True	App.											
3/27/68	30	30	275	12	0.70	0.50	0.4	3.2	1.0	1.0	0.05	3.8	1.4	5.6
4/04/68	8	15	110	3	0.80	0.50	0.5	3.8	0.6	1.5	<0.05	5.4	1.6	-
5/22/68	46	70	450	6	0.85	0.75	0.7	5.8	2.0	1.4	0.10	5.7	2.1	11.2
6/13/68	46	130	485	4	1.00	0.71	1.8	4.5	1.2	1.0	0.05	1.5	1.9	8.8
7/17/68	68	120	315	5	1.35	0.80	0.5	4.0	2.2	1.0	0.05	5.8	2.0	8.9
8/28/68	21	45	370	4	1.20	0.48	0.4	3.4	0.7	1.1	<0.05	7.2	2.3	6.5
9/25/68	30	15	180	5	1.15	0.31	0.7	3.9	0.6	1.0	0.05	6.1	1.7	8.0
10/14/68	9	30	80	4	0.55	0.50	0.8	3.2	0.4	1.0	<0.05	5.8	1.8	6.8
11/13/68	55	95	550	4	0.75	0.48	0.9	4.8	1.5	1.0	0.05	6.0	1.8	9.1
12/04/68	58	95	610	4	1.00	0.58	<0.1	4.8	1.8	1.2	0.08	6.2	1.9	11.2
ARITH. AVG. GEO. MEAN	37	64	342	5	0.94	0.56	0.7	4.1	1.2	1.1	0.06	5.4	1.8	8.5
1/06/69	20	20	50	5	1.00	0.50	1.8	4.0	0.8	1.2	0.08	7.8	1.6	12.0
2/19/69	28	25	50	4	0.85	0.42	0.2	4.3	1.0	1.0	<0.05	5.5	1.5	10.8
3/03/69	39	40	50	14	0.70	0.37	0.5	5.0	1.2	1.3	<0.05	5.2	1.7	10.0
4/02/69	35	15	-	6	0.85	0.65	0.2	3.4	1.0	1.0	<0.05	4.6	1.5	8.8
5/05/69	24	15	-	5	0.45	0.44	1.2	3.6	1.0	1.2	<0.05	3.4	1.4	8.0
6/26/69	26	20	-	4	0.29	0.38	0.3	3.8	0.8	0.7	0.20	4.6	1.3	8.8
7/16/69	36	10	-	13	0.32	0.46	1.0	4.9	1.2	1.4	0.10	6.9	2.4	8.8
8/04/69	80	-	-	6	0.27	0.34	0.3	4.5	3.0	1.2	0.06	4.9	2.4	8.7
9/10/69	21	25	-	8	0.49	0.40	1.1	5.4	1.0	1.2	0.05	7.4	2.5	10.0
10/15/69	5	15	-	7	1.15	0.48	0.1	5.2	0.4	1.3	0.20	6.4	2.1	11.0
11/12/69	50	10	-	5	1.80	0.40	0.3	3.8	1.3	1.1	<0.05	5.1	1.8	5.0
ARITH. AVG. GEO. MEAN	33	20	50	7	0.74	0.44	0.6	4.4	1.2	1.1	0.09	5.6	1.8	9.3

* 4 Day BOD



CHATTAHOOCHEE RIVER
FIGURE 2
DISSOLVED OXYGEN PROFILES



CHATTAHOOCHEE RIVER
FIGURE 8
FECAL COLIFORM -- GEOM. MEAN

CHATTAHOOCHEE RIVER
USGS Sta. No. 2-3395 - West Point

DATE	TEMP. °C	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1 as $CaCO_3$	HARDNESS mg/1 as $CaCO_3$	SOLIDS mg/1		SPEC. COND. umho/cm 25°	C1 mg/1	COLIFORM MPN/100 ml	
							Diss.	Total			Total	Fecal
3-14-68	12.0	8.7	1.2	6.2	13	12	75	146	-	2.5	-	1,500
4-10-68	17.0	8.4	1.2	6.7	13	20	62	110	-	5.0	-	24,000
5-07-68	18.0	-	1.4	6.3	15	14	43	61	57	7.0	-	230,000
6-04-68	25.0	-	-	6.2	16	-	-	-	-	-	-	-
7-01-68	26.0	-	0.8	6.8	15	18	33	48	48	3.0	-	150
8-01-63	27.0	7.5	-	6.1	20	14	57	134	75	4.2	-	930
8-27-68	23.0	8.3	3.0	6.3	11	16	60	95	46	2.8	-	4,300
9-24-68	22.0	-	-	6.4	13	12	53	59	57	4.0	-	-
10-30-68	14.0	11.0	1.1	-	20	16	43	45	63	4.0	-	2,300
12-11-68	6.0	15.0	2.3	7.5	35	18	55	63	76	5.0	-	1,500
ARITH AVG.	19.0	9.8	1.6	-	17	16	53	85	60	4.2	-	33,000
GEO. MEAN											-	3,400
1-23-69	9.0	12.6	2.6	6.6	12	11	49	81	43	2.5	-	7,500
2-28-69	-	10.7	-	6.3	18	15	52	63	62	3.2	-	-
4-09-69	18.0	8.3	1.0	6.7	18	16	67	100	53	2.8	-	930
5-20-69	31.0	6.1	1.4	6.8	13	13	42	176	44	2.4	-	4,300
7-02-69	28.0	8.3	2.6	7.3	20	16	82	98	77	4.5	-	9,300
8-20-69	26.0	7.8	0.9	6.9	18	15	50	92	55	2.4	-	4,300
10-15-69	21.0	9.6	1.2	7.6	20	16	68	69	72	4.6	-	91
11-20-69	11.0	8.5	2.2	6.4	19	13	-	-	68	4.4	-	43,000
12-30-69	13.0	-	0.9	6.5	20	18	55	70	61	3.0	-	4,300
ARITH AVG.	19.6	9.0	1.6	-	18	15	58	94	59	3.3	-	9,200
GEO. MEAN											-	3,500

CHATTAHOOCHEE RIVER
USGS Sta. No. 2-3395 - West Point

DATE	TURB. JCU	COLOR APHA Units True	COLOR APHA Units App.	SO_4 mg/l	PO_4 (total) mg/l	NO_3(N) mg/l	NH_3(N) mg/l	Ca mg/l	IRON (total) mg/l	Mg mg/l	Mn mg/l	SODIUM mg/l	POTASSIUM mg/l	SILICA SiO_2 mg/l
3/14/68	125	380	-	3	0.11	<0.05	<0.1	2.5	4.60	0.7	0.07	2.0	1.4	9.0
4/10/68	40	140	-	2	0.25	0.50	0.3	3.3	1.30	1.2	0.45	3.0	1.3	11.5
5/07/68	26	45	-	4	0.20	0.53	0.1	3.8	1.00	1.2	<0.05	-	1.2	10.5
6/04/68	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7/01/68	17	45	-	4	0.50	0.62	0.1	3.7	0.80	1.1	<0.05	6.0	1.4	8.0
8/01/68	68	80	-	<2	1.00	0.80	0.3	4.8	2.00	1.3	<0.05	8.0	2.2	9.0
8/27/68	125	220	-	<2	0.38	0.24	0.2	3.2	4.20	1.1	0.10	3.5	2.0	10.5
9/24/68	10	25	-	2	0.90	0.34	<0.1	3.3	0.53	0.9	<0.05	5.8	1.5	7.5
10/30/68	9	45	-	3	0.55	0.54	<0.1	4.2	0.55	1.0	<0.05	5.5	1.6	10.2
12/11/68	21	70	-	5	0.55	0.38	0.1	4.3	1.10	1.3	0.18	5.8	1.6	18.0
ARITH. AVG.	49	117	-	3	0.49	0.44	0.2	3.7	1.79	1.1	0.12	5.0	1.6	10.5
1/23/69	87	90	-	3	0.65	0.28	-	3.0	4.00	0.9	0.06	3.5	1.6	10.8
2/28/69	15	25	-	4	0.50	0.28	<0.1	3.9	0.75	1.4	<0.05	5.5	1.2	11.8
4/09/69	40	40	-	3	0.80	0.60	<0.1	4.4	1.60	1.4	0.05	3.6	1.3	11.8
5/20/69	93	90	-	<2	0.15	0.30	<0.1	3.6	3.50	1.4	<0.05	3.0	1.6	11.2
7/02/69	17	20	-	4	0.62	0.28	<0.1	4.1	1.30	1.2	0.08	5.3	1.6	10.5
8/20/69	37	30	-	<2	0.50	0.54	<0.1	4.0	0.95	1.2	<0.05	3.9	1.7	9.8
10/15/69	7	20	-	6	0.95	0.54	<0.1	4.2	0.50	1.5	0.07	6.8	1.9	12.0
11/20/69	-	20	-	3	0.88	0.50	-	3.9	1.10	1.3	<0.05	4.8	1.7	8.9
12/30/69	12	30	-	3	0.48	0.38	<0.1	4.2	0.75	1.4	<0.05	4.1	1.5	-
ARITH. AVG.	38	41	-	3	0.61	0.41	0.1	3.9	1.61	1.3	0.06	4.5	1.6	1.1

CHATTAHOOCHEE RIVER
CC I - Just above Bartletts Ferry Dam

DATE	TEMP. °C	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1	HARDNESS mg/1 as	SOLIDS mg/1		SPEC. COND. umho/cm 25°	C1 mg/1	COLIFORM MPN/100 ml	
							Diss.	Total			Total	Fecal
3-19-68	14.0	10.9	1.8	7.1	12	12	35	45	48	5.5	930	430
4-09-68	17.0	12.0	3.1	7.8	15	12	34	37	48	5.0	<30	<30
5-14-68	25.0	7.5	1.5	8.5	16	10	48	55	55	4.4	<30	<30
6-04-68	28.0	8.5	5.0	7.9	16	14	43	55	51	3.0	<30	<30
7-01-68	31.0	8.6	3.2	9.6	19	14	53	62	70	3.0	<30	<30
7-31-68	29.8	8.1	2.3	9.1	18	14	53	61	65	3.6	<30	<30
9-18-68	24.5	8.1	2.0	7.4	18	12	47	51	61	6.0	91	<30
10-09-68	-	8.0	2.1	7.3	18	12	39	42	56	3.5	<30	<30
11-26-68	-	-	-	-	-	14	-	-	75	4.2	430	430
12-10-68	10.0	11.0	1.8	7.0	20	16	40	50	70	4.0	2,300	2,300
ARITH AVG.	22.4	9.2	2.5	-	17	14	44	51	60	4.2	390	330
GEO. MEAN											95	79
1-28-69	9.0	10.3	1.3	6.9	16	12	63	91	50	2.9	23,000	4,300
2-26-69	7.7	11.3	1.3	6.8	17	14	54	61	61	3.0	2,100	230
3-18-69	9.5	11.3	1.3	7.0	18	15	61	66	65	3.8	15,000	430
4-08-69	18.0	8.9	1.3	7.0	15	17	48	58	59	3.6	9,300	2,300
5-20-69	20.5	8.8	1.8	6.9	15	12	-	-	48	2.5	430	36
6-11-69	30.0	8.2	3.0	7.2	20	14	49	57	61	3.9	<30	<30
7-22-69	31.0	7.8	3.0	7.4	20	16	46	53	62	4.4	<30	<30
8-26-69	26.0	8.8	2.5	6.8	18	15	42	50	69	4.2	73	73
9-16-69	26.0	8.1	2.4	7.1	17	16	48	60	72	4.5	230	36
10-14-69	23.0	9.7	2.4	7.3	19	13	46	48	74	5.1	<30	<30
11-18-69	12.1	9.1	1.6	7.0	18	13	30	33	61	3.3	2,300	2,300
12-17-69	8.0	10.2	1.3	6.8	16	14	53	57	65	3.7	9,300	2,300
ARITH AVG.	18.4	9.4	1.9	-	17	14	49	58	62	3.7	5,200	1,000
GEO. MEAN											740	220

CHATTAHOOCHEE RIVER
CC I - Just above Bartletts Ferry Dam

DATE	TURB. JCU	COLOR APHA Units True	COLOR APHA Units App.	SO_4 mg/1	PO_4 (total) mg/1	$NO_3(N)$ mg/1	$NH_3(N)$ mg/1	Ca mg/1	IRON (total) mg/1	Mg mg/1	Mn mg/1	SODIUM mg/1	POTASSIUM mg/1	SILICA SiO_2 mg/1
3/19/68	20	30	135	2	0.15	0.28	0.1	3.0	0.55	1.0	<0.05	5.7	1.3	8.3
4/09/68	10	30	105	8	0.10	0.10	<0.1	3.0	0.25	1.2	<0.05	3.9	1.4	6.0
5/14/68	10	15	95	<2	<0.10	0.05	0.2	3.7	<0.10	1.0	<0.05	3.5	1.4	9.0
6/04/68	15	45	155	2	0.10	0.07	0.1	3.4	0.30	1.0	<0.05	3.5	1.4	8.7
7/01/68	11	15	120	4	0.15	0.06	<0.1	3.6	0.25	1.0	<0.05	6.0	2.2	5.8
7/31/68	17	30	140	<2	0.55	0.18	0.1	3.9	0.38	1.2	<0.05	6.5	1.4	6.8
9/18/68	6	20	105	3	0.15	0.24	<0.1	3.9	0.28	1.2	0.05	6.0	1.8	7.0
10/09/68	5	25	75	2	0.28	0.34	<0.1	3.3	0.20	1.0	0.05	5.7	1.4	7.0
11/26/68	27	130	245	3	0.15	0.46	<0.1	3.8	0.90	1.3	<0.05	7.5	1.8	9.0
12/10/68	27	90	255	5	0.45	0.57	<0.1	3.8	1.40	1.0	0.07	6.0	1.9	11.3
ARITH. AVG.	15	43	143	3	0.22	0.26	0.1	3.5	0.46	1.1	0.05	5.4	1.6	7.9
1/28/69	55	90	120	3	0.30	0.32	-	3.1	2.40	0.9	0.11	4.8	1.3	10.8
2/26/69	27	25	35	5	0.43	0.36	0.1	3.7	0.95	1.2	0.05	6.0	1.4	11.3
3/18/69	15	15	40	4	0.46	0.38	0.4	4.0	0.75	1.1	<0.05	6.2	1.2	11.5
4/08/69	17	20	-	5	0.30	0.45	<0.1	5.0	0.60	1.1	0.05	4.8	1.4	9.1
5/20/69	56	130	-	<2	0.30	0.30	<0.1	3.2	1.85	1.1	<0.05	3.8	1.5	9.0
6/11/69	32	15	-	4	0.25	0.10	<0.1	3.2	1.10	1.2	<0.05	4.6	1.6	9.8
7/22/69	6	5	-	5	0.21	<0.05	<0.1	3.6	0.15	1.1	<0.05	5.7	1.7	9.2
8/26/69	8	5	-	6	0.38	0.32	-	4.8	<0.10	1.2	<0.05	5.4	2.0	9.0
9/16/69	6	5	-	8	0.25	0.28	0.1	4.0	0.40	1.2	0.45	6.0	1.8	9.1
10/14/69	5	10	-	7	0.35	0.25	<0.1	4.0	<0.10	1.2	0.05	7.0	1.9	10.0
11/18/69	6	5	-	5	0.30	0.40	0.1	3.5	0.40	1.2	0.05	5.5	1.8	8.5
12/17/69	17	30	-	10	0.28	0.35	<0.1	3.4	0.80	1.2	<0.05	5.4	1.8	9.0
ARITH. AVG.	21	30	65	5	0.32	0.30	0.1	3.8	0.80	1.1	0.09	5.4	1.6	9.7

CHATTAHOOCHEE RIVER
CC II - Just Downstream of Bartletts Ferry Dam

DATE	TEMP. °C	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1 as $CaCO_3$	HARDNESS mg/1 as $CaCO_3$	SOLIDS mg/1 Diss.	SOLIDS mg/1 Total	SPEC. COND umho/cm 25°	Cl mg/1	COLIFORM MPN/100 ml Total	COLIFORM MPN/100 ml Fecal
3-19-68	13.5	8.6	1.2	7.0	11	12	37	50	49	5.0	9,300	1,500
4-09-68	16.5	9.2	1.2	7.4	13	20	61	90	44	4.5	24,000	930
5-14-68	22.0	8.5	1.8	8.2	16	10	48	57	58	4.4	230	36
6-04-68	32.0	9.5	2.8	8.3	17	14	44	64	55	3.0	73	<30
7-01-68	31.8	9.2	3.3	9.6	18	12	42	52	62	3.0	91	91
7-31-68	30.3	7.4	1.6	7.1	18	14	48	56	59	3.2	110	110
9-18-68	24.8	7.2	1.9	7.2	15	12	39	46	65	5.0	73	73
10-09-68	-	9.5	2.1	7.1	16	12	42	46	54	4.5	73	73
11-26-68	-	-	-	-	-	14	-	-	68	4.2	2,300	2,300
12-10-68	10.8	10.7	1.1	7.0	18	14	41	49	70	4.0	1,500	230
ARITH AVG.	22.7	8.9	1.9	-	16	13	45	57	58	4.1	3,800	540
GEO. MEAN											480	180
1-28-69	9.5	10.3	1.2	7.0	16	11	61	81	53	3.1	2,300	2,300
2-26-69	8.0	10.8	1.4	6.9	16	14	-	-	56	3.2	930	930
3-18-69	9.5	10.9	1.3	7.0	17	15	52	61	62	3.6	2,300	36
4-08-69	17.5	9.6	1.9	6.8	17	13	41	57	52	3.6	2,300	91
5-20-69	19.0	8.9	1.4	6.7	14	11	56	78	46	2.6	43,000	2,300
6-11-69	28.0	8.2	2.7	7.1	18	14	51	89	58	3.2	73	73
7-22-69	31.0	7.4	2.1	7.2	17	16	49	58	58	4.2	36	<30
8-26-69	26.0	8.0	2.4	6.8	18	15	36	44	64	3.7	36	<30
9-16-69	26.0	8.7	2.4	7.0	16	-	52	59	-	4.6	91	36
10-14-69	23.0	8.9	1.5	7.4	16	12	41	44	60	3.6	<30	<30
11-18-69	12.8	10.1	1.1	7.0	17	12	-	-	60	3.4	3,900	3,900
12-17-69	8.5	11.0	0.9	6.8	16	12	57	59	59	3.1	2,300	2,300
ARITH AVG.	18.2	9.4	1.7	-	16	13	50	63	57	3.5	5,200	1,000
GEO. MEAN											570	220

CHATTAHOOCHEE RIVER
CC II - Just Downstream of Bartletts Ferry Dam

DATE	TURB. JCU	COLOR APHA Units True	COLOR APHA Units App.	SO_4 mg/1	PO_4 (total) mg/1	NO_3(N) mg/1	NH_3(N) mg/1	Ca mg/1	IRON (total) mg/1	Mg mg/1	Mn mg/1	SODIUM mg/1	POTASSIUM mg/1	SILICA SiO_2 mg/1
3/19/68	30	85	220	4	0.25	0.36	0.1	3.0	1.18	0.9	0.05	4.2	1.3	10.5
4/09/68	75	190	680	5	0.20	0.36	0.2	3.0	2.30	1.0	0.07	3.0	1.7	7.5
5/14/68	15	30	85	<2	0.10	0.27	0.2	3.4	0.20	1.0	<0.05	3.9	1.4	10.5
6/04/68	24	55	205	<2	0.15	0.09	0.2	3.4	0.80	1.0	<0.05	3.3	1.6	9.7
7/01/68	12	55	120	2	0.13	0.06	0.1	3.8	0.20	1.0	<0.05	5.8	2.2	7.0
7/31/68	17	25	175	<2	0.20	0.30	0.1	3.8	0.52	1.2	<0.05	8.0	1.4	7.8
9/18/68	6	20	95	2	0.15	0.43	<0.1	3.4	0.36	1.1	0.06	5.3	1.7	7.0
10/09/68	7	25	118	2	0.22	0.40	<0.1	3.0	0.30	0.9	<0.05	5.8	1.4	7.2
11/26/68	62	340	640	4	0.35	0.50	<0.1	3.7	2.20	1.1	0.08	-	2.0	10.0
12/10/68	25	80	235	4	0.37	0.57	<0.1	3.8	1.30	1.0	0.08	6.0	1.9	11.0
ARITH. AVG.	27	90	257	3	0.21	0.33	0.1	3.4	0.94	1.0	0.06	5.8	1.7	8.8
1/28/69	56	100	160	3	0.37	0.36	-	3.4	2.50	1.0	0.10	5.0	1.4	10.8
2/26/69	45	40	70	3	0.65	0.32	0.2	3.7	1.55	1.0	0.06	5.5	1.5	11.3
3/18/69	12	10	40	4	0.28	0.36	0.2	3.9	0.60	1.1	<0.05	5.5	1.2	11.3
4/08/69	21	30	-	4	0.25	0.40	<0.1	3.6	0.80	1.1	<0.05	4.6	1.4	9.8
5/20/69	59	110	-	<2	0.25	0.25	<0.1	3.0	2.15	1.0	<0.05	3.4	1.5	9.0
6/11/69	42	20	-	4	0.25	0.20	<0.1	3.1	1.40	1.3	0.05	4.1	1.4	9.0
7/22/69	12	5	-	4	0.23	0.20	<0.1	3.2	0.20	1.0	<0.05	5.5	1.7	9.0
8/26/69	5	10	-	6	0.30	0.22	-	3.4	0.25	1.2	0.06	5.2	2.0	8.0
9/16/69	10	5	-	5	0.23	0.36	<0.1	4.0	0.80	1.3	0.05	6.1	1.9	9.1
10/14/69	9	10	-	5	0.25	0.25	<0.1	3.2	0.40	1.1	<0.05	5.4	1.7	9.8
11/18/69	17	10	-	4	0.32	0.40	<0.1	4.0	0.75	1.2	<0.05	5.4	1.8	8.8
12/17/69	10	25	-	7	0.33	0.30	<0.1	3.0	0.50	1.1	<0.05	4.8	1.5	3.0
ARITH. AVG.	25	31	90	4	0.31	0.30	0.1	3.5	0.99	1.1	0.06	5.0	1.6	9.5

CHATTAHOOCHEE RIVER
CC III - Columbus Waterworks Intake

DATE	TEMP. ^oC	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1 as $CaCO_3$	HARDNESS mg/1 as $CaCO_3$	SOLIDS mg/1		SPEC. COND. umho/cm 25°	Cl mg/1	COLIFORM MPN/100 ml	
							Diss.	Total			Total	Fecal
3-19-68	15.0	8.6	1.6	7.1	14	10	50	64	43	6.0	15,000	4,300
4-09-68	18.5	10.4	1.8	7.2	13	14	52	82	45	4.0	7,500	930
5-14-68	27.0	8.2	2.0	7.3	17	14	49	53	56	4.0	91	<30
6-04-68	30.0	10.5	4.4	8.2	16	14	53	68	55	2.5	<30	<30
7-01-68	32.0	9.5	4.0	9.7	18	14	50	55	68	4.0	<30	<30
7-31-68	29.9	8.5	2.2	9.1	18	12	47	55	59	2.7	72	30
9-18-68	24.8	7.6	2.0	7.2	16	14	43	48	55	5.5	<30	<30
10-09-68	-	7.8	1.5	7.1	16	11	37	39	53	4.0	30	<30
11-26-68	-	-	-	-	-	14	-	-	73	4.1	2,300	430
12-10-68	10.8	8.3	1.2	7.0	18	-	42	50	68	4.0	2,300	2,300
ARITH AVG.	23.5	8.8	2.3	-	16	13	47	57	58	4.1	2,700	810
GEO. MEAN											280	140
1-28-69	8.5	10.8	1.2	7.0	17	13	62	79	56	3.3	9,300	4,300
2-26-69	7.3	11.5	1.0	6.8	16	14	58	63	56	3.5	9,300	430
3-18-69	9.1	11.4	1.1	6.9	18	15	60	65	63	3.7	430	91
4-08-69	15.2	9.7	1.3	6.9	16	15	50	64	60	3.2	430	36
5-20-69	19.8	9.4	1.3	6.9	14	12	57	84	47	2.6	1,500	930
6-11-69	30.0	8.2	2.8	7.6	18	14	50	58	56	3.1	30	<30
7-22-69	30.5	8.0	2.7	7.3	18	15	41	47	59	4.2	430	36
8-26-69	27.5	7.0	1.8	6.7	16	14	37	46	65	3.7	<30	<30
9-16-69	25.0	8.0	1.1	6.9	16	14	49	56	64	3.8	4,300	430
10-14-69	24.0	9.6	1.9	7.4	17	11	39	43	58	3.6	30	30
11-18-69	12.5	10.5	1.5	7.0	18	13	30	39	61	3.4	150	150
12-17-69	9.1	10.7	0.8	6.8	15	13	31	45	58	3.5	4,300	930
ARITH AVG.	18.2	9.6	1.5	-	17	14	47	57	59	3.5	2,500	620
GEO. MEAN											550	160

CHATTAHOOCHEE RIVER
CC III - Columbus Waterworks Intake

DATE	TURB. JCU	COLOR APHA Units		SO_4 mg/1	PO_4 (total) mg/1	$NO_3(N)$ mg/1	$NH_3(N)$ mg/1	Ca mg/1	IRON (total) mg/1	Mg mg/1	Mn mg/1	SODIUM mg/1	POTASSIUM mg/1	SILICA SiO_2 mg/1
		True	App.											
3/19/68	35	85	275	3	0.25	0.36	<0.1	3.0	1.20	1.0	0.08	-	1.4	9.3
4/09/68	65	150	550	<2	0.20	0.38	0.3	3.0	1.85	1.0	0.07	3.0	1.6	7.0
5/14/68	15	45	85	<2	0.15	0.12	0.3	3.6	0.15	1.1	<0.05	3.6	1.4	10.0
6/04/68	20	45	165	2	0.10	0.08	0.2	3.4	0.65	1.0	<0.05	3.8	1.4	9.5
7/01/68	11	30	105	4	0.15	0.06	0.1	3.7	0.15	1.0	<0.05	5.5	2.2	8.8
7/31/68	15	25	140	3	0.13	0.22	0.2	3.8	0.30	1.2	<0.05	6.5	1.4	7.7
9/18/68	7	20	112	4	0.10	0.30	<0.1	3.5	0.36	1.1	0.07	5.2	1.7	7.0
10/09/68	6	30	95	<2	0.18	0.42	<0.1	3.0	0.30	0.9	0.05	5.5	1.4	7.0
11/26/68	47	275	420	3	0.30	0.46	<0.1	3.9	1.10	1.2	0.08	6.5	1.9	10.0
12/10/68	26	100	255	6	0.32	0.52	<0.1	3.7	1.35	1.0	0.07	5.8	2.0	11.5
ARITH. AVG.	25	80	220	3	0.19	0.29	0.2	3.5	0.74	1.0	0.06	5.0	1.6	8.8
1/28/69	48	70	100	3	0.30	0.38	-	3.6	2.20	1.0	0.10	5.5	1.4	10.8
2/26/69	23	45	75	5	0.32	0.31	0.2	3.4	1.15	1.1	0.07	5.5	1.4	11.0
3/18/69	10	5	30	3	0.24	0.34	0.3	4.0	0.55	1.1	0.05	5.6	1.2	11.3
4/08/69	28	40	-	3	0.25	0.40	0.1	5.8	1.00	1.1	0.06	4.2	1.4	10.0
5/20/69	20	40	-	<2	0.10	0.15	<0.1	3.0	0.65	1.0	<0.05	3.6	1.5	7.0
6/11/69	8	25	-	4	0.15	<0.05	0.1	3.0	0.40	1.2	<0.05	3.9	1.1	9.3
7/22/69	8	5	-	4	0.18	0.14	0.3	3.2	0.15	1.1	<0.05	5.4	1.7	9.0
8/26/69	12	10	-	6	0.10	0.25	-	3.6	<0.10	1.2	<0.05	5.2	2.0	8.0
9/16/69	7	5	-	5	0.17	0.32	<0.1	3.3	0.40	1.1	0.05	5.6	1.8	9.1
10/14/69	7	10	-	5	0.18	0.25	<0.1	3.1	0.25	1.0	<0.05	5.0	1.8	9.2
11/13/69	11	10	-	4	0.28	0.42	0.1	3.5	0.45	1.2	0.05	5.5	1.9	9.5
12/17/69	8	20	-	5	0.33	0.32	<0.1	3.0	0.40	1.1	0.05	4.8	1.5	7.8
ARITH. AVG.	25	24	68	4	0.22	0.28	0.2	3.5	0.64	1.1	0.06	5.0	1.6	9.3

CHATTAHOOCHEE RIVER
CC IV - Just above North Highland Dam

DATE	TEMP. °C	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1 as $CaCO_3$	SOLIDS mg/1 Dissolved	SOLIDS mg/1 Total	COLIFORM MPN/100 ml Total	COLIFORM MPN/100 ml Fecal
3-19-68	14.0	9.2	1.3	7.0	15	50	69	15,000	4,300
4-09-68	15.8	9.4	1.0	7.1	12	51	88	15,000	1,500
5-14-68	22.0	7.8	1.8	7.0	17	47	54	15,000	1,500
6-04-68	26.0	7.3	2.8	7.7	16	43	58	2,300	2,300
7-01-68	29.0	7.8	3.1	7.2	18	55	61	9,300	9,300
7-31-68	29.9	7.5	2.2	7.2	18	53	63	93,000	43,000
9-18-68	24.8	7.3	2.1	7.1	16	39	46	4,300	4,300
10-09-68	-	6.8	1.6	7.0	16	40	45	23,000	23,000
11-26-68	-	-	-	-	-	-	-	4,300	430
12-10-68	10.1	9.0	1.3	6.9	17	39	50	4,300	930
ARITH AVG.	21.4	8.0	1.9	-	16	46	59	19,000	9,100
GEO. MEAN								10,000	3,600
1-28-69	8.5	11.0	1.8	7.0	15	72	89	23,000	2,300
2-26-69	7.5	11.6	1.0	6.9	16	48	54	15,000	140
3-18-69	9.1	11.3	1.1	6.9	17	52	56	2,300	930
4-08-69	15.1	9.8	1.3	6.8	17	45	60	1,500,000	39,000
5-20-69	18.9	9.5	1.3	6.8	14	66	95	230,000	21,000
6-11-69	27.0	8.1	1.5	6.9	18	50	61	930,000	9,300
7-22-69	29.9	7.4	1.9	6.8	17	42	52	23,000	2,300
8-26-69	27.0	7.1	1.7	6.5	17	38	44	4,300	4,300
9-16-69	26.0	7.4	1.3	6.8	15	45	53	93,000	23,000
10-14-69	22.5	8.0	1.5	6.7	17	44	49	43,000	43,000
11-18-69	13.0	9.5	1.2	6.9	18	31	36	12,000	7,500
12-17-69	8.9	10.5	1.0	6.8	15	44	47	4,300	4,300
ARITH AVG.	17.8	9.3	1.4	-	16	48	58	240,000	13,000
GEO. MEAN								36,000	5,500

CHATTAHOOCHEE RIVER
CC V - Central of Georgia R R Bridge

DATE	TEMP. °C	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1	HARDNESS mg/1 as	SOLIDS mg/1		SPEC. COND. umho/cm 25°	C1 mg/1	COLIFORM MPN/100 ml	
							Diss.	Total			Total	Fecal
3-19-68	13.5	9.3	1.0	7.0	13	10	44	64	48	6.0	4,300	1,500
4-09-68	16.8	9.2	0.9	7.1	13	22	43	88	44	5.0	9,300	2,300
5-14-68	22.0	8.8	1.4	7.2	17	12	47	53	57	4.0	4,300	2,300
6-04-68	25.0	8.0	2.0	6.8	17	12	38	57	53	3.0	2,300	930
7-01-68	28.0	8.2	2.0	7.2	18	18	46	57	60	3.0	7,500	4,300
7-31-68	29.5	7.8	1.3	7.3	17	16	48	59	61	3.0	15,000	15,000
9-18-68	24.5	8.3	1.5	7.1	17	12	38	46	56	5.5	230,000	230,000
10-09-68	-	8.5	1.0	7.1	16	12	41	46	55	4.0	75,000	23,000
11-26-68	-	-	-	-	-	13	-	-	74	4.4	75,000	39,000
12-10-68	9.0	10.7	1.5	7.1	18	15	44	51	72	4.0	43,000	4,300
ARITH AVG	21.0	8.8	1.4	-	16	13	43	58	58	4.2	47,000	32,000
GEO. MEAN											17,000	7,300
1-28-69	8.5	11.6	1.6	7.1	16	13	67	86	56	3.4	4,300	4,300
2-26-69	7.8	12.0	0.9	7.0	17	14	55	60	58	4.1	23,000	23,000
3-18-69	9.8	11.8	1.3	6.9	17	15	52	57	63	3.5	4,300	430
4-08-69	16.0	10.0	1.4	7.2	16	15	47	64	67	3.4	4,300	430
5-20-69	19.7	9.5	1.2	6.9	16	12	56	104	45	2.6	43,000	930
6-11-69	26.0	8.2	1.3	7.0	17	-	46	58	-	-	9,300	290
7-22-69	29.0	7.7	1.9	7.0	22	-	38	51	-	-	9,300	9,300
8-26-69	27.0	8.1	1.9	6.9	16	-	28	42	-	-	23,000	9,300
9-16-69	25.0	8.2	1.3	7.0	18	13	52	59	64	3.9	23,000	9,300
10-14-69	22.0	9.2	0.9	6.9	17	11	44	50	58	3.7	23,000	4,300
11-18-69	13.0	10.5	0.9	7.1	16	12	36	41	62	3.4	43,000	9,300
12-17-69	8.3	11.5	0.9	6.9	15	11	34	41	58	3.4	4,300	430
ARITH AVG.	17.7	9.9	1.3	-	17	13	46	59	59	3.5	18,000	5,900
GEO. MEAN											13,000	2,500

CHATTAHOOCHEE RIVER
CC V - Central of Georgia RR Bridge

DATE	TURB. JCU	COLOR APHA Units True	COLOR APHA Units App.	SO_4 mg/1	PO_4 (total) mg/1	NO_3(N) mg/1	NH_3(N) mg/1	Ca mg/1	IRON (total) mg/1	Mg mg/1	Mn mg/1	SODIUM mg/1	POTASSIUM mg/1	SILICA SiO_2 mg/1
3/19/68	40	105	325	2	0.30	0.40	0.2	3.0	1.85	0.9	0.07	3.7	1.4	9.0
4/09/68	85	230	770	<2	0.20	0.40	0.4	3.0	2.85	1.0	0.09	2.7	1.8	7.5
5/14/68	15	45	95	<2	0.15	0.36	0.2	3.4	0.25	1.0	0.05	3.8	1.4	10.5
6/04/68	28	80	245	3	0.20	0.29	0.3	3.4	0.95	1.0	0.05	4.2	1.5	9.5
7/01/68	17	30	120	4	0.15	0.18	0.2	3.7	0.25	1.2	<0.05	5.2	2.2	8.8
7/31/68	20	30	180	<2	0.20	0.34	0.2	3.8	0.52	1.2	0.06	5.8	1.4	7.7
9/18/68	8	20	100	3	-	0.37	0.1	3.5	0.36	1.1	0.06	5.8	1.8	7.0
10/09/68	11	30	120	2	0.28	0.52	<0.1	2.9	0.40	0.9	0.06	5.8	1.5	7.1
11/26/68	10	290	450	4	0.35	0.46	<0.1	2.7	1.80	1.2	0.06	7.5	2.0	10.0
12/10/68	26	90	255	6	0.34	0.60	<0.1	3.8	1.40	1.0	0.07	6.5	2.0	11.5
ARITH. AVG.	26	95	266	3	0.24	0.44	0.2	3.3	1.06	1.0	0.06	5.0	1.7	8.9
1/28/69	50	90	120	2	0.42	0.36	-	3.4	2.10	1.0	0.08	6.5	1.3	10.5
2/26/69	23	40	90	4	0.42	0.31	0.2	3.5	1.05	1.1	0.06	6.0	1.4	11.3
3/18/69	13	10	30	3	0.28	0.34	0.2	4.0	0.60	1.1	<0.05	5.6	1.2	11.3
4/08/69	26	40	-	3	0.30	0.40	0.1	6.4	1.10	1.1	0.05	4.7	1.4	9.8
5/20/69	70	120	-	<2	0.25	0.20	0.1	3.0	2.00	1.1	0.05	3.4	1.5	9.2
6/11/69	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7/22/69	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/26/69	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/16/69	7	5	-	6	0.21	0.38	<0.1	3.0	0.40	1.1	0.05	6.0	1.8	9.3
10/14/69	11	10	-	5	0.25	0.43	<0.1	2.9	0.35	1.0	<0.05	5.2	1.8	9.5
11/18/69	8	10	-	4	0.30	0.42	<0.1	3.5	0.40	1.2	<0.05	5.8	1.9	8.8
12/17/69	8	15	-	4	0.37	0.35	<0.1	3.6	0.35	1.5	<0.05	4.8	1.5	7.8
ARITH. AVG.	24	38	80	4	0.31	0.35	0.1	3.7	0.93	1.1	0.05	5.3	1.5	9.7

CHATTAHOOCHEE RIVER
CC VI - Just Downstream of Bull Creek

DATE	TEMP. °C	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1 as $CaCO_3$	HARDNESS mg/1 as $CaCO_3$	SOLIDS mg/1		SPEC. COND. umho/cm 25°	C1 mg/1	COLIFORM MPN/100 ml	
							Diss.	Total			Total	Fecal
3-19-68	14.0	10.0	1.2	7.0	11	-	45	67	-	-	7,500	4,300
4-09-68	16.8	9.5	1.4	7.0	12	-	49	96	-	-	15,000	1,500
5-14-68	22.0	8.7	1.5	7.2	16	-	49	55	-	-	4,300	4,300
6-04-68	25.0	7.9	2.4	7.1	16	-	41	53	-	-	15,000	4,300
7-01-68	28.0	8.2	2.6	7.4	18	-	39	50	-	-	4,300	4,300
7-31-68	29.3	8.0	1.7	7.3	19	-	48	62	-	-	4,300	4,300
9-18-68	24.5	8.3	1.5	7.1	16	-	35	45	-	-	230,000	4,300
10-09-68	-	8.5	1.0	7.2	16	-	44	46	-	-	430,000	430,000
11-26-68	-	-	-	-	-	-	-	-	-	-	4,300	2,300
12-10-68	9.0	10.2	1.2	7.1	17	-	40	47	-	-	9,300	4,300
ARITH AVG.	21.1	8.8	1.6	-	16	-	43	58	-	-	72,000	46,000
GEO. MEAN											15,000	5,800
1-28-69	8.5	11.4	1.5	7.0	16	-	66	81	-	-	7,500	4,300
2-26-69	7.8	11.8	0.7	6.9	16	-	59	65	-	-	43,000	930
3-18-69	9.5	12.4	1.4	6.9	17	-	55	66	-	-	2,300	2,300
4-08-69	16.0	10.0	1.3	7.0	16	-	63	78	-	-	4,300	750
5-20-69	19.6	9.6	1.3	6.9	16	-	56	106	-	-	15,000	4,300
6-11-69	26.0	8.0	1.3	7.0	15	14	48	63	56	3.0	93,000	4,300
7-22-69	28.9	7.8	2.1	6.8	23	15	33	61	60	3.9	93,000	43,000
8-26-69	26.8	8.5	1.9	6.9	16	16	33	43	63	3.7	21,000	4,300
9-16-69	25.0	8.0	1.3	7.0	17	-	55	61	-	-	43,000	23,000
10-14-69	22.0	8.0	1.0	6.9	17	-	44	49	-	-	9,300	4,300
11-18-69	13.0	10.7	0.9	7.1	18	-	-	-	-	-	4,300	4,300
12-17-69	8.3	11.5	1.2	6.9	16	-	43	52	-	-	2,300	2,300
ARITH AVG.	17.6	9.8	1.3	-	17	15	50	66	60	3.5	28,000	8,200
GEO. MEAN											13,000	4,100

CHATTAHOOCHEE RIVER
CC VII - Just Downstream of Columbus Sewage Treatment Plant

DATE	TEMP. °C	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1 as $CaCO_3$	SOLIDS mg/1 Dissolved	SOLIDS mg/1 Total	COLIFORM MPN/100 ml Total	COLIFORM MPN/100 ml Fecal
3/19/68	14.0	9.0	5.0	7.0	12	80	97	9,300	9,300
4/09/68	16.9	8.5	2.6	7.0	12	68	108	4,600,000	930,000
5/14/68	22.0	8.5	3.5	7.0	22	80	88	4,600,000	2,400,000
6/04/68	26.0	7.0	6.8	7.2	16	53	72	11,000,000	2,100,000
7/01/68	28.3	8.3	3.5	7.1	19	56	62	230,000	230,000
7/31/68	29.5	7.6	6.0	7.5	22	68	88	11,000,000	4,600,000
9/18/68	24.4	7.6	8.2	7.1	23	59	78	11,000,000	2,400,000
10/09/68	-	8.0	4.7	6.9	21	61	64	11,000,000	11,000,000
11/26/68	-	-	-	-	-	-	-	>11,000,000	11,000,000
12/10/68	8.8	10.2	3.0	7.4	22	-	-	4,300	4,300
ARITH. AVG.	21.2	8.3	5.4	-	19	66	82	6,400,000	3,500,000
GEO. MEAN								1,400,000	750,000
1/28/69	9.0	11.3	8.2	6.8	21	85	104	>11,000,000	11,000,000
2/26/69	8.2	11.0	8.2	6.7	30	88	101	>11,000,000	1,500,000
3/18/69	10.0	11.7	5.9	6.8	20	64	75	>11,000,000	2,400,000
4/08/69	16.0	10.0	7.0	6.7	20	63	97	4,600,000	930,000
5/20/69	19.5	9.6	5.5	6.7	19	63	129	930,000	930,000
6/11/69	26.0	8.5	2.0	6.9	17	56	80	>11,000,000	>11,000,000
7/22/69	29.0	7.6	2.4	6.9	22	41	62	43,000	15,000
8/26/69	26.5	8.2	5.5	6.8	23	40	54	>11,000,000	750,000
9/16/69	25.0	7.9	3.1	6.9	33	83	98	4,600,000	1,500,000
10/14/69	22.5	8.7	8.5	6.7	28	58	71	>11,000,000	11,000,000
11/18/69	13.5	10.5	8.6	6.9	34	55	69	>11,000,000	11,000,000
12/17/69	8.3	11.5	1.5	6.9	30	-	-	43,000	4,300
ARITH. AVG.	17.8	9.7	6.0	-	25	63	85	7,300,000	4,300,000
GEO. MEAN								3,100,000	1,100,000

CHATTAHOOCHEE RIVER
CC VIII - At Confluence with Upatoi Creek

DATE	TEMP. °C	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1 as $CaCO_3$	SOLIDS mg/1		COLIFORM MPN/100 ml	
						Dissolved	Total	Total	Fecal
3-19-68	14.0	9.5	3.1	7.1	12	51	70	230,000	43,000
4-09-68	17.0	9.3	2.5	6.9	11	51	98	230,000	43,000
5-14-68	22.0	7.5	2.9	7.1	20	56	66	930,000	430,000
6-04-68	26.0	7.0	2.9	7.2	18	35	51	430,000	93,000
7-01-68	28.3	8.0	3.2	7.2	17	48	59	43,000	43,000
7-31-68	29.8	6.5	2.8	7.4	18	54	81	230,000	93,000
9-18-68	24.5	7.4	1.7	7.0	17	43	60	430,000	230,000
10-09-68	-	8.4	2.5	6.8	18	50	53	460,000	150,000
11-26-68	-	-	-	-	-	-	-	2,400,000	230,000
12-10-68	8.7	10.4	2.5	7.1	17	40	50	930,000	430,000
ARITH AVG.	21.3	8.2	2.7	-	16	48	65	630,000	180,000
GEO. MEAN								390,000	130,000
1-28-69	8.1	10.5	2.3	7.1	19	73	90	1,500,000	930,000
2-26-69	7.5	12.1	1.9	7.0	18	60	70	930,000	150,000
3-18-69	10.0	11.2	4.6	6.9	20	65	114	2,400,000	15,000
4-08-69	15.5	10.8	1.4	6.9	18	37	59	750,000	93,000
5-20-69	19.5	9.6	1.8	6.8	17	51	121	15,000	2,300
6-11-69	26.0	8.3	1.5	6.8	16	54	81	2,100,000	390,000
7-22-69	29.3	7.0	2.6	6.8	19	38	49	430,000	23,000
8-26-69	26.5	8.2	3.0	6.7	19	44	60	4,600,000	1,500,000
9-16-69	25.0	7.6	2.0	7.0	17	54	68	430,000	93,000
10-14-69	22.0	9.3	2.2	6.8	17	39	48	930,000	230,000
11-18-69	12.8	9.7	1.6	7.3	18	38	42	930,000	930,000
12-17-69	8.2	11.0	1.4	6.8	15	40	50	230,000	43,000
ARITH AVG.	17.5	9.6	2.2	-	18	49	71	1,300,000	370,000
GEO. MEAN								700,000	110,000

CHATTAHOOCHEE RIVER
CC IX - Just Downstream of Oswichee Creek

DATE	TEMP. °C	D.O. mg/1	BOD mg/1	pH	ALKALINITY (total) mg/1 as $CaCO_3$	SOLIDS mg/1 Dissolved	SOLIDS mg/1 Total	COLIFORM MPN/100 ml Total	COLIFORM MPN/100 ml Fecal
3/19/68	13.5	10.0	1.4	6.9	12	49	73	750,000	93,000
4/09/68	17.0	7.9	1.6	6.9	11	50	102	230,000	43,000
5/14/68	22.0	8.0	2.2	7.1	18	51	60	230,000	93,000
6/04/68	27.0	8.2	3.1	7.4	17	35	48	15,000	9,300
7/01/68	30.0	8.6	3.4	8.5	19	57	63	43,000	23,000
7/31/68	30.3	7.6	1.8	7.5	20	56	64	43,000	43,000
9/18/68	24.6	7.0	1.6	7.0	17	44	50	430,000	43,000
10/09/68	-	12.0	1.7	6.9	18	53	55	230,000	93,000
11/26/68	-	-	-	-	-	-	-	430,000	430,000
12/10/68	8.6	10.1	1.3	7.0	17	39	47	210,000	23,000
ARITH. AVG.	21.6	8.8	2.1	-	17	48	62	260,000	89,000
GEO. MEAN								160,000	52,000
1/28/69	8.5	11.0	1.7	7.0	17	69	90	150,000	43,000
2/26/69	8.0	12.1	1.5	6.9	15	56	62	750,000	75,000
3/18/69	10.0	11.7	2.1	6.9	17	55	61	230,000	93,000
4/08/69	15.5	10.5	1.4	6.9	16	50	65	230,000	43,000
5/20/69	20.0	9.5	1.8	6.8	14	51	118	230,000	9,300
6/11/69	27.0	8.0	1.8	6.9	17	49	60	93,000	43,000
7/22/69	30.0	7.4	2.4	6.8	17	38	51	23,000	4,300
8/26/69	27.2	7.3	1.9	6.7	17	42	53	23,000	7,500
9/16/69	26.0	7.0	2.5	6.8	17	54	60	43,000	23,000
10/14/69	22.9	8.0	1.4	6.7	16	41	52	23,000	23,000
11/18/69	12.8	10.8	1.8	7.2	18	-	-	1,500,000	290,000
12/17/69	8.8	11.5	2.2	6.8	16	42	57	11,000,000	430,000
ARITH. AVG.	18.1	9.6	1.9	-	16	50	66	1,200,000	90,000
GEO. MEAN								180,000	39,000

CHATTAHOOCHEE RIVER
CC X - Seaboard Airline R R Bridge

DATE	TEMP. °C	D.O. mg/l	BOD mg/l	pH	ALKALINITY (total) mg/l as $CaCO_3$	HARDNESS mg/l as $CaCO_3$	SOLIDS mg/l		SPEC. COND. umho/cm 25°	Cl mg/l	COLIFORM MPN/100 ml	
							Diss.	Total			Total	Fecal
3-19-68	13.5	9.5	1.1	6.9	12	10	39	60	44	5.5	93,000	75,000
4-09-68	17.0	8.0	1.2	6.9	12	18	43	65	47	5.0	230,000	9,300
5-14-68	24.0	7.5	2.5	7.1	19	12	45	52	57	4.5	15,000	930
6-04-68	27.0	7.4	2.9	7.5	17	12	33	43	56	2.5	2,300	2,300
7-01-68	29.5	7.9	3.1	8.2	21	16	62	67	65	3.0	<30	<30
7-31-68	31.0	8.0	2.0	8.0	20	14	52	60	65	3.4	150	73
9-18-68	25.2	6.6	1.6	7.0	18	14	47	54	64	6.0	930	230
10-09-68	-	13.1	1.9	7.1	18	12	55	56	64	5.0	7,500	43
11-26-68	-	-	-	-	-	14	-	-	80	4.7	23,000	9,300
12-10-68	9.2	9.3	1.2	7.0	17	15	34	41	73	4.2	120,000	39,000
ARITH AVG.	22.0	8.6	1.9	-	17	14	46	55	62	4.4	49,000	14,000
GEO. MEAN											6,000	1,300
1-28-69	8.5	11.0	1.1	7.0	15	14	75	89	58	3.6	43,000	23,000
2-26-69	9.0	11.4	1.2	6.9	17	14	59	65	61	4.4	150,000	93,000
3-18-69	9.9	11.4	1.9	6.8	18	15	51	58	68	4.1	93,000	4,300
4-08-69	16.2	10.0	1.5	6.9	15	13	51	69	49	3.4	230,000	15,000
5-20-69	20.0	9.4	1.6	6.8	14	12	50	94	42	2.8	43,000	23,000
6-11-69	27.0	8.5	2.2	7.0	15	14	45	49	57	3.2	2,300	91
7-22-69	30.0	7.0	3.9	6.7	16	14	38	51	65	4.5	4,300	930
8-26-69	28.2	8.0	2.9	6.9	19	14	49	60	67	3.9	430	91
9-16-69	26.0	7.7	2.7	6.8	18	13	48	58	74	4.3	150	150
10-14-69	22.8	8.9	2.0	6.8	16	10	45	52	60	3.8	230	230
11-18-69	12.0	10.5	1.6	7.2	18	13	34	39	67	4.0	430,000	150,000
12-17-69	9.0	11.0	1.3	6.8	17	12	45	58	62	3.8	230,000	9,300
ARITH AVG.	18.2	9.6	2.0	-	16	13	49	62	61	3.8	100,000	27,000
GEO. MEAN											14,000	3,200

CHATTAHOOCHEE RIVER
CC X - Seaboard Airline RR Bridge

DATE	TURB. JCU	COLOR APHA Units		SO_4 mg/l	PO_4 (total) mg/l	NO_3(N) mg/l	NH_3(N) mg/l	Ca mg/l	IRON (total) mg/l	Mg mg/l	Mn mg/l	SODIUM mg/l	POTASSIUM mg/l	SILICA SiO_2 mg/l
		True	App.											
3/19/68	45	135	385	<2	0.50	0.36	0.2	3.0	1.60	0.9	0.08	4.2	1.4	9.8
4/09/68	50	110	435	<2	0.33	0.36	0.6	3.0	1.55	1.2	0.09	3.9	1.6	8.0
5/14/68	10	30	95	2	0.20	0.33	0.4	3.6	0.15	1.0	<0.05	4.4	1.4	10.0
6/04/68	17	45	140	3	0.15	0.28	0.2	3.1	0.50	1.0	<0.05	5.0	1.4	9.7
7/01/68	19	30	130	4	0.17	0.08	0.9	3.7	0.15	1.2	<0.05	6.0	2.3	9.0
7/31/68	18	30	160	4	0.18	0.14	0.2	3.8	0.28	1.2	<0.05	7.3	1.5	7.3
9/18/68	4	20	105	4	0.20	0.36	0.1	3.4	0.25	1.1	0.06	7.5	1.9	6.8
10/09/68	8	30	120	3	0.39	0.38	0.2	3.2	0.35	1.0	0.06	8.4	1.6	7.0
11/26/68	50	90	95	4	0.25	0.46	<0.1	4.1	0.50	1.4	<0.05	8.0	1.8	10.0
12/10/68	29	105	270	7	0.37	0.58	<0.1	3.5	1.40	1.0	<0.05	6.5	2.1	11.3
ARITH. AVG.	25	62	194	4	0.27	0.33	0.3	3.4	0.67	1.1	0.06	6.1	1.7	8.9
1/28/69	34	60	60	6	0.70	0.34	-	3.7	1.50	1.0	0.06	6.8	1.3	11.0
2/26/69	27	35	70	6	0.37	0.28	0.2	3.7	1.20	1.0	0.08	6.8	1.5	10.8
3/18/69	11	10	30	6	0.36	0.31	0.5	4.1	0.60	1.1	0.06	6.5	1.2	11.3
4/08/69	32	45	-	5	0.30	0.30	0.2	3.6	1.10	1.1	<0.05	4.2	1.4	9.8
5/20/69	58	100	-	<2	0.20	0.25	<0.1	3.0	2.05	1.0	0.05	3.6	1.5	9.0
6/11/69	12	30	-	5	0.20	0.15	<0.1	3.2	0.70	1.2	<0.05	3.9	1.3	9.0
7/22/69	19	10	-	6	0.27	0.24	<0.1	3.4	0.40	1.1	<0.05	6.2	1.7	9.2
8/26/69	6	10	-	7	0.26	0.15	-	3.6	0.20	1.2	<0.05	6.1	2.0	7.8
9/16/69	10	5	-	8	0.26	0.32	<0.1	3.4	0.80	1.1	<0.05	6.5	2.3	9.1
10/14/69	5	10	-	5	0.35	0.34	<0.1	3.0	0.25	1.0	<0.05	5.4	1.8	8.0
11/18/69	8	10	-	4	0.40	0.42	<0.1	3.7	0.40	1.3	<0.05	6.4	1.9	8.8
12/17/69	10	10	-	6	0.45	0.34	0.1	3.4	0.45	1.1	0.05	5.1	1.6	8.0
ARITH. AVG.	19	28	53	6	0.34	0.29	0.2	3.5	0.80	1.1	0.05	5.6	1.6	9.3

MR. STEIN: Are there any comments or questions?

(No response.)

MR. STEIN: First, Mr. Ledbetter, I want to thank you for a really excellent statement.

I think I am beginning to understand Mr. Howard's comment earlier. The picture that Mr. Ledbetter has given us is a classic one of a grossly polluted stream, and his notion about speaking of recreation, water contact, or anything of that kind is unthinkable in waters like this. You might just as well be going into some sewage treatment plant and diving into the primary tank and trying to swim in there.

Now, I think that we have always said the first job we have to do is to get the dead hogs out of the river before we begin cleaning up the rest.

We had this conference in 1966. We were supposed to have a cleanup by June of 1971. I think if we don't meet those dates and these conditions that Mr. Ledbetter presents are going to obtain in the Chattahoochee River, you are in for another year and a half of very, very bad water.

I think it is commendable that the State and the State agency have analyzed this and set this forth so clearly. I thank you for your statement, Mr. Ledbetter.

Are there any comments or questions?

(No response.)

MR. STEIN: If not, thank you very much.

MR. HOWARD: Charlie, I would like you to give a little presentation on our industrial waste dischargers.

This is Mr. Charles Starling, our Director of the Industrial Waste Service, who will give us a rundown on the industrial wastes situation.

STATEMENT OF
MR. CHARLES H. STARLING,
DIRECTOR, INDUSTRIAL WASTE SERVICE
GEORGIA WATER QUALITY CONTROL BOARD
ATLANTA, GEORGIA

MR. STARLING: Thank you, Mr. Howard.

Mr. Chairman, I am Charles H. Starling, Director of the Industrial Waste Service of the Georgia Water Quality Control Board. The following comments will review briefly the program of industrial waste pollution control on the Georgia side of the Chattahoochee River from Atlanta to Fort Gaines.

At the 1966 conference, Mr. Howard's statement recapitulated the sources of industrial waste. This recapitulation included 6 industries which had been referred to in the Federwal Water Pollution Control Administration report, and an additional 46 industries which had been surveyed by the State.

Thus, a total of 52 industries were shown to have waste discharges of significance, some with pollution control programs completed or in various stages of accomplishment.

Of the 52 industries discussed, 29 have now completed pollution control programs. A list of these industries will be attached to this report and entered in the conference records, but will not be read at this time. It should be noted, however, that, in many cases, the industrial wastes have simply been diverted from the river to public sewer systems, all of which do not at this time have acceptable treatment facilities. Thus, the responsibility for the problem has been transferred, but the problems will not have been completely solved until the public sewage treatment facilities -- principally those in Atlanta and Columbus -- are upgraded to acceptable limits.

Following is a status report on the remaining 23 industries, mentioned in 1966, but whose programs have either not been completed, or have been completed but not given final approval.

See following tables.

GEORGIA INDUSTRIES CITED AT JULY 14-15, 1966, CONFERENCE BUT NOW IN COMPLIANCE OR DIVERTED TO PUBLIC SEWERS

NAME OF INDUSTRY	LOCATION	TYPE OF INDUSTRY	COMMENTS
Table #5 of West's Report			
Deering-Milliken (formerly Callway Mills)	LaGrange	Textile	All wastewater discharged to municipal sewers with adequate treatment
Fieldcrest Mills, Inc. (formerly Muscogee Mill)	Columbus	Textile	All wastewater discharged to municipal sewers
West Point-Pepperell	Columbus	Textile	All wastewater discharged to municipal sewers
ATLANTA AREA			
Atlanta Tallow	Atlanta	Rendering plant	All wastewater discharged to municipal sewers
Georgia Power Company	Atlanta	Steam electric generating plant	Sedimentation pond provided for fly ash and domestic waste treated in secondary biological plant both of which are considered adequate but which have never been formally approved by this office
Ideal Byproducts Co.	Gwinnett Co.	Rendering plant	Burned and no plans for reopening
Kraft Foods Co.	Decatur	Dairy products	Cooling water discharged to tributary of Peachtree Creek - no action deemed necessary
Mead Packaging (Mead-Atlanta Paper Co.)	Atlanta	Paper board converting	All wastewater discharged to municipal sewers
W. C. Meredith Co.	East Point	Wood preserving	All wastewater discharged to municipal sewers
Prestolite Battery	East Point	Batteries	Fulton County Health Department has advised that all wastewater now discharges to municipal sewers

NAME OF INDUSTRY	LOCATION	TYPE OF INDUSTRY	COMMENTS
Seaboard Oil Company	Doraville	Oil reclamation	Change in wastewater handling techniques now allows this company to operate on closed wastewater system
Seitzinger, Inc.	Atlanta	Lead reclamation	Fulton County Health Department has advised that wastewater is neutralized and hauled away for final disposal by scavenger service
Seydell Wooley Company	Atlanta	Textile	Fulton County Health Department advises all wastewater is diverted to municipal sewer
Southern Concrete Co.	Doraville	Ready-mix concrete	Sedimentation facilities installed and approved by Georgia Water Quality Control Board
Southern States Chemical Company	East Point	Textile chemicals	Fulton County Health Department has advised that no wastewater discharge problem now exists with operation
Southern Wood Preserving Company	East Point	Wood preserving	All wastewater discharged to municipal sewers
Swift Agricultural Chemical Company	Atlanta	Fertilizer and pesticides	Fulton County Health Department has advised that manufacturing processes have been changed and wastewater discharge eliminated
COBB & DOUGLAS COUNTIES			
Austell Box Board Co.	Austell	Paper repulping	Closed wastewater handling facility installed and approved by Georgia Water Quality Control Board
Golden City Hosiery Mill	Villa Rica	Textile	All wastewater now discharged to municipal sewers
Southern Latex	Austell	Latex	Wastewater treatment facilities have been installed and approved by Georgia Water Quality Control Board

NAME OF INDUSTRY	LOCATION	TYPE OF INDUSTRY	COMMENTS
COWETA COUNTY			
Bibb Mfg. Co. (Arnco Mill)	Sargent	Textile	Wastewater treatment facilities have been installed and approved by Georgia Water Quality Control Board
Newnan Mills	Newnan	Textile	Out of operation with no plans for reopening
COLUMBUS AREA			
Armour Agricultural Chemical Company	Columbus	Fertilizer	Wastewater handling techniques have been changed so that company now operates closed wastewater system
Bibb Mfg. Co.	Columbus	Textile	All wastewater now discharged to municipal sewers
STEWART COUNTY			
Camillia Mining Co.	Lumpkin	Iron ore washing	Out of operation and no plans for reopening
Davis Bros. Mining Co.	Lumpkin	Iron ore washing	Closed wastewater handling system has been installed and approved by Georgia Water Quality Control Board
Dunbar-Layton Mining Co.	Lumpkin	Iron ore washing	Wastewater handling techniques have been changed to allow for operation of closed wastewater system
Lee Mining Co.	Lumpkin	Iron ore washing	Out of operation and no plans for reopening
Lumpkin Mining Co.	Lumpkin	Iron ore washing	Cited plant now out of operation and no plans for reopening. New operation at another location has a closed wastewater system installed

INDUSTRIES CITED AT JULY 14-15, 1966 CONFERENCE BUT NOT YET IN COMPLETE COMPLIANCE

NAME OF INDUSTRY	LOCATION	TYPE OF INDUSTRY	COMMENTS
Table #5 of West's Report			
Sonoco Products	Atlanta	Paper repulping	Primary treatment presently provided. Secondary treatment to be provided by City of Atlanta in current program. Status is satisfactory.
Municipal Incinerator	Atlanta	Incineration	City will provide treatment facilities concurrently with the sanitary sewage program. No progress has been made to date.
Reeves Bros.	Columbus	Textile	Mill management plans to discharge to City sewers but progress has been slow.
ATLANTA AREA			
Anaconda Aluminum (formerly Amarlite)	Atlanta	Aluminum anodizing	Consulting engineer has been retained and plans are in preparation. Progress has been slow.
Bona Allen	Buford	Tannery	Wastewater facilities have been installed but have not been formally approved pending evaluation of treatment efficiency.
Coats & Clark	Clarkdale	Textile	Present plans are for this wastewater to be discharged to the proposed expansion of the Cobb County sewerage system. Efforts on the part of the industry have been satisfactory.
Complete Auto Transit Co.	Doraville	Transportation	Satisfactory progress is being made on diversion of all wastewater from this operation to public sewers.

NAME OF INDUSTRY	LOCATION	TYPE OF INDUSTRY	COMMENTS
DeKalb County Water Works	Doraville	Water treatment sludge	On notice from Georgia Water Quality Control Board and consulting engineers presently preparing plans for treatment facility. Necessary land has been obtained by condemnation.
General Motors Assembly Division	Doraville	Automobile assembly	Satisfactory progress is being made on diversion of all wastewater from this operation to municipal sewers.
Hess Oil Company	Doraville	Petroleum terminal	Storage tanks diked and an oil separation lagoon installed but has not received formal approval of this office.
L & N Railroad Company	Atlanta	Transportation	Wastewater treatment facilities have been installed but system has not yet been inspected for approval.
McConnell Drum Service	Doraville	Drum reclamation	On notice from Georgia Water Quality Control Board to comply with Georgia Water Quality Control Act. Follow up is needed.
Plantation Pipe Line Co.	Doraville	Petroleum products transfer	An oil separation lagoon and traps have been installed but system has not been inspected for approval.
Southern Railway	Atlanta	Transportation	Construction permit has been issued and construction will start shortly.
Williams Bros. Concrete Co.	Doraville	Ready-mix concrete	Wastewater treatment facilities have been installed but have not received formal approval.
Kerr-McGee (formerly Chem-Salts Co.)	Powder Springs	Chemical products	Plans are under way for changing the manufacturing processes which will substantially affect effluent characteristics and existing conditions will need reevaluation.
Cracker Asphalt Co.	Douglasville	Refinery	Original wastewater treatment facilities installed proved to be inadequate. Permit has been rescinded and consulting engineers are presently designing new facilities.

NAME OF INDUSTRY	LOCATION	TYPE OF INDUSTRY	COMMENTS
Lockheed-Georgia - USAF	Marietta	Aircraft assembly and U.S. Air Force Operations	U.S.A.F. has advised that adequate facilities will be installed prior to July 1971.
COWETA COUNTY			
Bibb Manufacturing Co. (Arnall Mill)	Sargent	Textile	Construction of waste treatment facilities is nearing completion in accordance with plans approved by Georgia Water Quality Control Board.
William L. Bonnell Co.	Newnan	Aluminum anodizing	Consulting engineers have been retained to design treatment facilities.
Grantville Mills (formerly Flagg-Utica)	Grantville	Textile	City of Grantville has agreed to accept this waste in proposed municipal system.
TROUP COUNTY			
U. S. Rubber Company	Hogansville	Textile	Domestic wastewater has been diverted to municipal sewer system and process wastewater is discharged to retention basins which have not been approved pending evaluation of efficiency.
HARRIS COUNTY			
Cagles, Inc. (formerly Valley Products)	Pine Mountain Valley	Poultry processing	Consulting engineer is designing facilities but is running behind schedule on completion of plans. Progress has been slow.

C. H. Starling

Two additional sources of industrial pollution should be noted at this time which were not included in the 1966 conference discussion.

Franklin Aluminum Company at Franklin, Heard County, had been directed to develop a program for treatment of waste resulting from its anodizing operations. Instead, we have been informed within the last few days the waste was discharged into the city's sewerage system, resulting in a gross overload on the city waste treatment plant. The city has been advised by its consultants to discontinue receiving this waste. The Water Quality Control Board will require the industry to provide appropriate facilities.

The Crown Zellerbach Corporation in Gwinnett County is discharging some 60,000 gpd of strong starch and printing ink waste into headwaters of Peachtree Creek. Pending construction of public sewers, interim treatment facilities were provided by the industry and the county, but these have proved to be entirely inadequate and, further, have not been properly operated and maintained, with the result that they have become almost entirely ineffective. Crown Zellerbach has been notified to move the wet process elsewhere or provide proper and adequate treatment facilities.

There appears to be no reason why all of these industries cannot have complete programs by July 1971.

MR. STEIN: Thank you, Mr. Starling.

Are there any comments or questions?

MR. THOMAN: I have a couple of questions.

MR. STEIN: Surely.

MR. THOMAN: Charlie, for my own edification and possibly some of the people, what is the situation with Bona Allen? That has been a rough thing since 1960.

MR. STARLING: The operation of their plant has been beset with all sorts of difficulties.

They have never worked out a treatment that we can completely live with. Although it looks like it is on the borderline of complying with the requirements, it is not going to do the job insofar as color removal that we would like to see done, but in oxygen-consuming matter, why, I think it will.

But they are still working with the process of chemical treatments and trying new chemicals.

MR. THOMAN: One other thing: Have you got any timetable from the city of Atlanta on its fly ash removal incinerator?

MR. STARLING: No, sir, other than that it will be accomplished concurrently with their sanitary sewerage program.

MR. THOMAN: Is that a different department or the same department of the city government?

MR. STARLING: The result of the 1966 conference discussions was that this waste was to be discharged to the city's sewer system. That didn't seem reasonable to me, so I called Jack Cameron and he told me that the city would build separate facilities at the plant.

MR. THOMAN: This is merely the construction of a retention pond and throwing some dikes up. It is the simplest thing that there is to do.

MR. STARLING: Well, I think it will be a little more complicated than that. I don't think the space is available for a conventional fly ash pond. I think they will have to have removal facilities.

But it is a very unattractive thing. It discolors the river and should be treated and handled more properly than it has been.

MR. THOMAN: As to Cobb County Water Works, when are they going to get their sludge removal facilities in?

MR. STARLING: Can you answer that, Mr. Roberts?

MR. WILLIAM ROBERTS: I have a letter that I have received.

MR. HOWARD: Would you like to come up and read the letter?

MR. ROBERTS: It is in our files. I don't have it with me.

MR. HOWARD: I don't have it here either.

MR. ROBERTS: But they have been handicapped by not having the property available.

MR. STEIN: How long do you expect it will be before it is done?

MR. ROBERTS: Oh, three months, four months.

MR. STEIN: Thank you.

MR. HOWARD: Thank you, Charles.

MR. STEIN: Thank you very much.

By the way, I would like to commend Mr. Starling on the report. He is one of the real dedicated industrial waste experts working for State government, and he always comes up with a meaningful, clear report.

I think, Mr. Howard, you should really be proud of Mr. Ledbetter and Mr. Starling. Their reports today were excellent.

MR. HOWARD: Mr. Chairman, I pray for them every evening and I thank the Lord.

(Laughter.)

I try to get raises for them and give them a very high rating on efficiency reports.

MR. STEIN: That won't get them a raise.

MR. THOMAN: That won't get them a raise, nor will the prayers.

MR. HOWARD: You can't have everything.

MR. STEIN: Well, I see you have taken care of the psychic and spiritual life. What they need is a little material benefit.

MR. HOWARD: We will try to get that.

MR. STEIN: Fine.

MR. HOWARD: I would like to have our Director of Planning and Development, who handles all the municipality problems, Mr. Wesley B. Williams, come up and give you the score on our municipality problems.

Come up, Wes.

STATEMENT OF
MR. WESLEY B. WILLIAMS,
DIRECTOR, PLANNING AND DEVELOPMENT
GEORGIA WATER QUALITY CONTROL BOARD
ATLANTA, GEORGIA

MR. WILLIAMS: Mr. Chairman, I am Wesley B. Williams, Director, Planning and Development, Georgia Water Quality Control Board.

For the record, I shall present two tables which tabulate and summarize progress and programs of various communities with discharges to the Chattahoochee River Basin from Atlanta to Fort Gaines. Table A is presented in the same format and order as a table presented at the 1966 conference. This table utilizes a geographical arrangement from Atlanta to Fort

Gaines. Table B supplements Table A and the communities are listed in alphabetical order.

The schedules and status reports presented in these tables are based on our best information just prior to the conference and are possibly subject to modifications on the basis of statements presented by representatives of the various communities today. Some local government bodies, such as Fulton County, did present schedules after the 1966 conference, but had not reconfirmed these schedules prior to this session. Also, on some of the proposed plant construction, there may be changes as final plans and specifications and financing are developed. Rather than read these tables, item by item, I shall give a narrative presentation of their content.

At the 1966 conference, the following communities had what was considered as adequate treatment plants at that time:

Cobb County (South Cobb Plant only)
Fort Benning (Harmony Church Plant only)
Franklin
Fulton County (Marsh Creek Plant only)
LaGrange (Blue John Creek Plant only)
Newnan (Snake Creek Plant only)

It should be noted that Marietta and Smyrna were placed in a rather special category due to intrastate pollution of small tributary receiving streams. Also, some of the aforementioned plants must install effluent disinfection, or provide better disinfection, to comply with recommendations of the 1966 conference.

Adequate plants, which have been completed since July 1966, are located as follows:

Callaway Gardens
Columbus (North Plant only)
Fort Benning (provided secondary treatment at plant No. 1 and plant No. 2)
Hogansville
LaGrange (completed improvements at Hogansville Road Plant and completed construction of Yellow Jacket Creek Plant and the Blue John Creek Industrial Plant)
Newnan (new Southside Plant only)
Villa Rica

Adequate plants which are presently under construction are located as follows:

Atlanta (first phase only of R. M. Clayton Plant)
Fairburn
Newnan (New Mineral Springs Branch Plant only)
Union City (New system and plant -- not covered at 1966 conference)

W. B. Williams

The total design capacity of the aforementioned plants -- either completed or placed under construction -- is about 15.5 MGD, representing water pollution control expenditures on the order of $17,000,000. It should be noted that Atlanta's R. M. Clayton Plant is not included in the quoted figure on capacity but the cost of the preparatory (first) stage of construction is included in the expenditure figure.

The aforementioned communities are to be commended for proceeding with construction programs. However, Columbus and Newnan have not completed all construction necessary to treat all wastewater discharges adequately. Atlanta has completed no treatment facilities on the Chattahoochee River to date.

The following have planning in various stages for wastewater treatment as indicated in the tables:

Atlanta (R. M. Clayton Plant and Utoy Creek Plant; Sandy Creek Plant is to be abandoned)
Cobb County (expansion of South Cobb Plant and construction of the new Chattahoochee River Plant and the new Sweetwater Creek Plant)
Columbus (South Plant)
Douglasville
Fort Gaines
Fulton County (expansions of Marsh Creek and Camp Creek Plants; Fulco Plant is to be abandoned)

Lumpkin

Newnan (Wahoo Creek Plant which will replace the existing inadequate Cotton Mill Branch Plant)

Palmetto

Pine Mountain

The preceding listing represents a planned design capacity of approximately 204 MGD at an estimated expenditure on the order of $140,000,000 for water pollution control facilities. Also, the preceding listing does not include work that may be necessary for the city of Smyrna and the city of Marietta. Neither does the listing include Fulton County's Big Creek Plant, located near Roswell with a discharge to the Chattahoochee River, but beyond the geographical limits of the discharges covered by this conference.

Of the communities with programs in the planning stages, most have indicated that they would essentially meet the 1966 conference recommendations with a few exceptions.

Atlanta has stated that the end of 1972 is the earliest that their Chattahoochee River program can be completed. Atlanta has not moved as rapidly and expeditiously with their program as we would have liked. We realize that Atlanta has a very large and complex project which has presented numerous problems and which requires a tremendous expenditure both in money and in planning manpower. The problem is further complicated by being a metropolitan system serving areas of DeKalb and Fulton County outside of the Atlanta corporate limits. However, we do feel that the program could have been expedited if the program had been given the priority it deserved. We still feel that the program should be given the very highest priority if the construction is completed by the end of 1972.

Columbus is another case in point. The Columbus Water Board has not presented a firm schedule for completion of secondary treatment additions to the South Plant. We recognize and give credit to the fact that Columbus did construct the North Plant. Also, we recognize that Columbus does have problems in financing and in providing other greatly needed sewerage programs, such as replacing existing sewers, building interceptor sewers, and the like. It is our opinion, however, that Columbus could proceed with a forthright program of treatment if the project were given a high enough priority. A PL 660 grant offer to Columbus is possible from an anticipated increase in grant funds to the State of Georgie for Fiscal Year 1970.

In the case of Fulton County we have not received a recent schedule on their planning activities and proposed construction. Mr. Turner McDonald of Fulton County has presented an up-to-date schedule here today. To meet the 1966 conference schedule, Fulton County must place top priority on engineering and in making financial arrangements. Fulton County has a rapidly expanding population in both the north and south areas of the county and sewerage needs, both existing and projected, are almost overwhelming. However, with the proper priority and allocations of engineering manpower, the county could construct the needed secondary treatment facilities without undue delays beyond the date set by the original conference.

Newnan should receive due credit for an almost continuous water pollution control construction program since the 1966 conference. However, Newnan has not presented a firm schedule on the Wahoo Creek Plant to replace the existing overloaded Cotton Mill Branch Plant and to serve additional areas. If Newnan gives the Wahoo Creek Plant the priority it deserves, we feel that Newnan could also have all of its wastewaters adequately treated without undue delays beyond the date set by the original conference.

Smaller cities that may not be able to meet the original schedule include Douglasville, Lumpkin, Pine Mountain and West Point. It is possible that each of these cities will receive PL 660 grant offers from increased Fiscal Year 1970 funds. Pine Mountain has final plans and specifications prepared. Both West Point and Douglasville have their preliminary engineering completed and could proceed rapidly with programs barring no further lost motion or delays. Lumpkin must proceed at once with a very forthright program in order to have completed facilities by the July 1, 1971, date.

The cities of Smyrna and Marietta are somewhat special cases. They have the alternative of either connecting to the proposed Cobb County improvement program or constructing improved treatment facilities, including the proper form of tertiary treatment. To date, neither city has indicated which alternative they would follow and this matter must receive very serious consideration in the near future since intrastate pollution is involved.

We would like to briefly recognize that there are a number of problems in the overall Chattahoochee River abatement program. Some of these problems are applicable only to certain communities while other problems are applicable to nearly all communities. One of the biggest problems is the matter of financing, especially with the high interest rate on today's bond market. Incidentally, we are presently very optimistic of obtaining limited State grant funds to give some assistance to municipalities and counties in financing. Another problem is the matter of providing immediately needed sewer extensions while concurrently providing adequate treatment facilities.

Industrial development, particularly in the smaller cities, sometimes makes it very difficult to provide sewers and treatment facilities fast enough to keep up with the industrial growth. An example of an industrial waste load recently occurred in the city of Franklin, where an aluminum processing industry wanted to discharge approximately 250,000 gallons per day of industrial waste to the city's 80,000 gallons per day treatment plant. Providing public sewerage facilities and long-range planning for rapidly growing suburban areas also presents a problem for cities and counties. This is especially true where water supplies or recreational areas are located on receiving streams. Many other immediate problems could be enumerated. We feel that most of these problems can be met and resolved in a rational and forthright basis with proper advanced planning, management, and with adequate rate charges.

Of course, there are many other existing and potential problems that must be faced for long-range planning for the river basin and for various communities. Such problems include stormwater separation, surface runoff from urban areas, affecting joint sewerage ventures, growth above water supply streams, effects of thermal pollution and impoundments and many others. However, we feel the immediate program at hand is to provide adequate water pollution control facilities for the various communities and tackle the other problems, not directly affecting the present program, on a rational and logical basis as a longer-range goal.

To summarize on the immediate objectives of the 1966 conference, many Georgia cities and counties have proceeded with forthright and aggressive programs and have met, or will be able to meet the conference recommendations. Others must assign a very high priority in order to complete adequate treatment facilities without undue delays beyond July 1971. Again, we would like to commend those communities that have proceeded with expeditious programs.

MR. STEIN: Thank you, Mr. Williams.

Are there any comments or questions?

MR. THOMAN: I have a comment.

Mr. Williams, did you include the entire statement for the record?

MR. WILLIAMS: No, I omitted part of it.

MR. STEIN: We will include the charts and letters as if read, without objection.

MR. THOMAN: But you do want the entire statement included in the record?

MR. WILLIAMS: I wanted the charts and the letters.

MR. THOMAN: But you didn't want the entire statement?

MR. WILLIAMS: I will give a modified statement for the record.

MR. THOMAN: You had better check out what he wants to have in there.

MR. HOWARD: No. We have what we want in there. I'm the chief editor, boy.

(Laughter.)

GEORGIA SEWERAGE SYSTEMS DISCHARGING TO THE CHATTAHOOCHEE RIVER BASIN
ATLANTA TO FORT GAINES

TABLE A -- LISTING OF PRESENT DISCHARGES AND WATER POLLUTION CONTROL ACTIVITIES

(NOTE: Listing is in same order as covered in PROCEEDINGS, pages 196a - 196d, for July 14-15, 1966 Conference)

PART I -- SYSTEMS COVERED BY FEDERAL WATER POLLUTION CONTROL ADMINISTRATION REPORT AND GEORGIA WATER QUALITY CONTROL BOARD REPORT AT 1966 CONFERENCE

COMMUNITY OR MUNICIPALITY	PRESENT FACILITIES	RECEIVING STREAM	PRESENT STATUS AND COMMENTS
*MARIETTA			
East Side Plant	Secondary +cl_2	Sope Creek	For intrastate pollution of small tributary receiving streams, which now flow through densely populated areas, either tertiary treatment or connection to programmed Cobb County sewer system improvements is considered necessary. Tertiary treatment additions mentioned in the 1st Conference Session have been held in abeyance pending negotiations with Cobb County and other developments.
S. E. Side Plant	Secondary +cl_2	Rottenwood Creek	
West Side Plant	Secondary +cl_2	Wards Creek	
South Side Plant	Secondary +cl_2	Olley Creek	
*COBB COUNTY (NOTE: See attached County letter and construction program.)			
Church Road Plant	Secondary +cl_2 (Inadequate)	Nickajack Creek	This overloaded trickling filter plant is scheduled for abandonment with flow diversion to S. Cobb Plant by October 1971.
South Cobb Plant	Secondary +cl_2	Chattahoochee River	Expansion to total capacity of 8.0 MGD (activated sludge with effluent disinfection) scheduled for completion by October 1971.

COMMUNITY OR MUNICIPALITY	PRESENT FACILITIES	RECEIVING STREAM	PRESENT STATUS AND COMMENTS
Chattahoochee River Plant	(See comments)	Chattahoochee River	A new 4.0 MGD activated sludge planc with effluent disinfection is programmed for completion by June 1972. Upon plant completion, a number of existing smaller interim plants in the service area will be abandoned.
Sweetwater Creek Plant	(See comments)	Chattahoochee River	A new 6.0 MGD activated sludge plant with effluent disinfection is programmed for completion by Dec., 1972. Initially, the plant is scheduled to serve the Olley Creek drainage basin, the Buttermilk Creek drainage basin and portions of the Sweetwater Creek drainage basin and the City of Austell. Upon plant completion, a number of smaller interim plants in the service area will be abandoned. NOTE: County presently planning to pump effluent to Chattahoochee River, below Sweetwater Creek confluence.
Clarkdale Imhoff Tank	Primary	Sweetwater Creek	Sewer system and primary treatment plant was acquired by Cobb County from Coats & Clark (see pg. 196h, 1966 PROCEEDINGS) since first sessions of Conference and is scheduled for abandonment when che Cobb County Sewerage program can be extended. No definite schedule on this has been presented.
*SMYRNA	Secondary +cl_2 (Inadequate)	Bohannon Creek	City has yet to make final decision on whether to abandon presently inadequate plant for connection to the proposed Cobb County sewerage program or to provide own expanded

COMMUNITY OR MUNICIPALITY	PRESENT FACILITIES	RECEIVING STREAM	PRESENT STATUS AND COMMENTS
			and upgraded treatment. No definite schedule presented. See attached City letter. (NOTE: A portion of Smyrna's wastewater is presently treated at Cobb County's Church Road Plant.)
*DOUGLASVILLE	Primary (Imhoff Tank)	Sweetwater Creek	Engineering Report has been prepared and plant site has been selected. City's Consulting Engineer reports that project should be completed by July 1971 pending grant funds and financing. PL 660 grant offer possible from increased FY 1970 funds.
*AUSTELL	Primary +cl_2	Sweetwater Creek	City presently intends to abandon plant for connection to Cobb County's proposed Sweetwater Creek Plant which is scheduled for completion by December 1972. Since 1966 Conference, City has installed effluent disinfection as an interim measure.
*ATLANTA R. M. Clayton Plant	Primary	Chattahoochee River	City reports final construction plans 60% complete to expand plant to 120 MGD with activated sludge treatment and effluent disinfection. Construction will be awarded in several contracts; the first was awarded one year ago. City's schedule for completion of all work is the end of 1972. See attached letter from City dated February 10, 1970.

COMMUNITY OR MUNICIPALITY	PRESENT TREATMENT	RECEIVING STREAM	PRESENT STATUS AND COMMENTS
Sandy Creek Plant	Primary	Chattahoochee River	City proposes plant abandonment with flow diversion to Utoy Creek Plant. Funds are budgeted for 1970 for diversion facilities.
Utoy Creek Plant	Primary	Utoy Creek	City is programming plant expansions and improvements to 30 MGD (activated sludge and effluent disinfection) by end of 1972. See also comments under Atlanta - Sandy Creek and Fulton County's Fulco Plant.
(NOTE: See Fulton County entry for Fulton County plants operated under contract by the City of Atlanta.)			
UNION CITY (New System)	Secondary $+cl_2$	Deep Creek	New 0.25 activated sludge plant (extended aeration) with effluent disinfection nearing completion. This plant serves a new public sewerage system. (NOTE: A portion of the Union City wastewater is discharged to the Flint River Basin through the Fulton County system.
*FAIRBURN	Secondary	Deep Creek	City's Consulting Engineer reports construction about 75% complete on new 0.30 MGD activated sludge plant with effluent disinfection; estimated completion is during June 1970
*PALMETTO	Primary	Bear Creek	City's Consulting Engineer reports that contracts have been tentatively awarded for sewage improvements, including a 0.20 MGD activated sludge plant with effluent disinfection. Presently, estimated completion is before July 1, 1971.

COMMUNITY OR MUNICIPALITY	PRESENT TREATMENT	RECEIVING STREAM	PRESENT STATUS AND COMMENTS
*NEWNAN			
Cotton Mill Branch Plant (East Plant)	Secondary (Inadequate)	Cotton Mill Branch	See attached letter from Newnan Water & Light Commission. Adequate treatment is being provided or is under construction for all wastewaters except for existing Cotton Mill Branch Plant, which is proposed for abandonment with construction of proposed new 1.0 MGD Wahoo Creek Plant for which no firm schedule has been presented. Effluent disinfection requirements on Snake Creek plant require further evaluation. New Mineral Springs Branch plant should be completed during 1970.
Snake Creek Plant (North Plant)	Secondary	Snake Creek	
Mineral Springs Branch Plant (West Plant)	Secondary +cl_2	Mineral Springs Branch	
South-Side Plant	Secondary +cl_2	Mountain Creek	
*GRANTVILLE			
Plant No. 1	Septic tank	New River	Final planning on new plant to replace existing contingent on whether a local industrial waste will be included in City project. Farmers Home Administration financial assistance has been secured and project is scheduled to be placed under construction during 1970; presently, estimated completion is by July 1, 1971.
Plant No. 2	Septic tank	Yellow Jacket Creek	
*HOGANSVILLE	Secondary +cl_2	Yellow Jacket Creek	0.5 MGD activated sludge plant (oxidation ditch) and effluent disinfection is in operation and awaiting final inspection. Adequate treatment provided.

COMMUNITY OR MUNICIPALITY	PRESENT TREATMENT	RECEIVING STREAM	PRESENT STATUS AND COMMENTS
*LAGRANGE			
Hogansville Road Plant	Secondary + cl_2	Yellow Jacket Creek	See attached letter from City. Adequate treatment provided for all wastewaters except that disinfection requirements at some plants will be subject to further evaluation prior to closing West Point reservoir.
Blue John Creek Plant	Secondary + cl_2	Blue John Creek	
Yellow Jacket Creek Plant	Secondary + cl_2	Yellow Jacket Creek	
Blue John Creek Plant (Industrial Waste)	Secondary	Blue John Creek	
*WEST POINT	Raw discharge	Chattahoochee River	City's Consulting Engineer reports that engineering surveys and studies underway preparatory to final plans and specifications; on sewerage improvements consisting of the elimination of existing combined sewers, new outfalls and lift stations to pump to West Point-Pepperell & Lanett, Ala., treatment facility; completion possible by July 1971, pending grant offer and finalizing schedule and arrangements with West Point - Pepperell and Lanett, Ala. PL 660 grant offer possible from increased FY 1970 funds.
*COLUMBUS			
North Plant	Secondary + cl_2	Chattahoochee River	Adequate treatment provided at 2.0 MGD activated sludge plant with effluent disinfection.
South Plant	Primary + cl_2	Chattahoochee River	Engineering report and preliminary plans completed for 23 MGD activated sludge addition with effluent disinfection. Columbus Board of Water Commissioners report construction contingent on financing arrangements and no firm construction schedule can be presented. See attached letter. PL 660 grant offer possible from increased FY 1970 funds.

COMMUNITY OR MUNICIPALITY	PRESENT TREATMENT	RECEIVING STREAM	PRESENT STATUS AND COMMENTS
*FORT BENNING			
Plant No. 1	Secondary +cl_2	Chattahoochee River	**Adequate secondary treatment (trickling filters with effluent disinfection) now in operation at plant 1 (4.62 MGD) and plant 2 (2.93 MGD). Effluent disinfection requirements for the 2.80 Harmony Church trickling filter plant are subject to further study and evaluation.**
Plant No. 2	Secondary +cl_2	Chattahoochee River	
Harmony Church Plant	Secondary	Mill Creek	

PART II -- SYSTEMS NOT COVERED BY FEDERAL WATER POLLUTION CONTROL ADMINISTRATION REPORT BUT INCLUDED BY GEORGIA WATER QUALITY CONTROL BOARD AT 1966 CONFERENCE

COMMUNITY OR MUNICIPALITY	PRESENT TREATMENT	RECEIVING STREAM	PRESENT STATUS AND COMMENTS
FULTON COUNTY			
Marsh Creek Plant	Secondary $+cl_2$	Chattahoochee River	Existing treatment adequate subject to expansion and improvements as plant load increases. County proposes expansion to 3.0 MGD during 1973.
Fulco Plant	Primary	Chattahoochee River	County proposes to abandon plant and pump flows to Atlanta's Utoy Creek plant. No recent schedule for this has been presented.
Camp Creek Plant	Primary $+cl_2$	Camp Creek	Engineering plans for proposed 7.5 MGD activated sludge plant with effluent disinfection are schedule for completion by June 1970. No recent construction schedule has been presented.
VILLA RICA	Secondary $+cl_2$	Sweetwater Creek	Adequate treatment presently provided at 0.20 MGD activated sludge plant (extended aeration) with effluent disinfection. City has also completed a 0.23 MGD activate sludge plant (extended aeration) with effluent disinfection which discharges to the Tallapoosa River Basin.
FRANKLIN	Secondary $+cl_2$	Chattahoochee River	Existing 0.80 MGD activated sludge plant (extended aeration) is considered adequate subject to evalu tion as requirements for effluent disinfection.

COMMUNITY OR MUNICIPALITY	PRESENT TREATMENT	RECEIVING STREAM	PRESENT STATUS AND COMMENTS
*PINE MOUNTAIN	Primary (Imhoff tank)	Turkey Creek	Engineering plans complete on new 0.15 MGD activated sludge plant with effluent disinfection. No recent construction schedule has been presented. PL 660 grant offer is possible from increased FY 1970 funds.
*CALLAWAY GARDENS	Secondary +cl_2	Little Mt. Creek	Recently expanded 0.16 MGD activated sludge plant with polishing pond and effluent disinfection is considered adequate.
*FORT GAINES	Raw discharge	Chattahoochee River	City's Consulting Engineer reports that final construction plans and specifications in preparation on a 0.15 MGD activated sludge plant (oxidation ditch) with effluent disinfection. A grant and loan for the project have been approved by HUD and a grant has been approv by EDA. Estimated completion is September 1971.
LUMPKIN	Primary (Imhoff tank)	Hodchodkee Creek	No detailed planning has been acc plished but City has applied for Federal financial assistance for planning and engineering. No sche dule has been presented; PL 660 grant offer is possible from FY 1970 increased funds.

*Correspondence relative to program are attached hereto.

GENERAL NOTE:

Plants for Cobb County subdivisions, schools, trailer parks, etc., covered at 1966 Conference are not listed in this report. Many of these plants are interim facilities scheduled to be abandoned with implementation of Cobb County's sewerage improvement program. Adequate treatment is provided on an interim basis at all such treatment facilities. In addition to those in Cobb County, there are a number of other small treatment facilities serving schools, nursing homes, subdivisions and the like which have not even been included in this report.

GEORGIA SEWERAGE SYSTEMS DISCHARGING TO THE CHATTAHOOCHEE RIVER BASIN
ATLANTA TO FORT GAINES

TABLE B - TABULATION ON WATER POLLUTION CONTROL PROGRESS AND PROGRAMS

COMMUNITY OR MUNICIPALITY	CONSTRUCTED OR PROPOSED TREATMENT		RECEIVING STREAM	ENGINEERING & CONSTRUCTION STATUS	ESTIMATED CONSTR. COMPLETION DATE, IF APPLICABLE**
	Design Capacity MGD	Type*			
Atlanta					
R.M. Clayton Plant	120.00	A.S.	Chatt. R.	First phase under construction	Dec. '72
Sandy Creek Plant	To be abandoned		Chatt. R.	See Note (1)	See Note (1)
Utoy Creek Plant	30.00	A.S.	Utoy Creek	Planning underway	Dec. '72
Austell (2)	To be abandoned		Sweetwater Cr.	Preliminary planning comp.	Dec. '72
Callaway Gardens	0.16	A.S.	Little Mt. Cr.	Constr. completed	
Cobb County					
Church Road Plant (3)	To be abandoned		Nickajack Cr.	Final planning underway	Oct. '71
South Cobb Plant	8.00	A.S.	Chatt. R.	Final planning underway	Oct. '71
Chattahoochee R. Plant	4.00	A.S.	Chatt. R.	Final planning underway	June '72
Sweetwater Cr. Plant	6.00	A.S.	Chatt. R.	Final planning underway	Nov. '72
Clarkdale Imhoff Tank (4)	To be abandoned		Sweetwater Cr.	Prelim. planning complete	Indefinite
Columbus					
South plant	23.00	A.S.	Chatt. R.	Prelim. planning complete	Not furnished
North plant	2.00	A.S.	Chatt. R.	Construction completed	
Douglasville	1.0	A.S.	Sweetwater Cr.	Prelim. planning complete	July '71 (possibly)
Fairburn	0.30	A.S.	Deep Creek	Constr. 75% complete	June '70
Fort Benning					
Plant No. 1	4.62	T.F.	Chatt. R.	Construction completed	
Plant No. 2	2.93	T.F.	Chatt. R.	Construction completed	
Harmony Church Plant	2.80	T.F.	Mill Creek	Completed prior to 7/66	

TABLE B - TABULATION ON WATER POLLUTION CONTROL PROGRESS AND PROGRAMS

COMMUNITY OR MUNICIPALITY	CONSTRUCTED OR PROPOSED TREATMENT Design Capacity MGD	Type*	RECEIVING STREAM	ENGINEERING & CONSTRUCTION STATUS	ESTIMATED CONSTR. COMPLETION DATE, IF APPLICABLE**
Fort Gaines	0.15	A.S.-P.P.	Chatt. R.	Final planning underway	Sept. '71
Franklin	0.80	A.S.	Chatt. R.	Completed prior to 7/66	
Fulton County					
Marsh Creek (5)	3.0	T.F.-A.S.	Chatt. R.	Engr. report & prelim. planning complete	1973
Fulco (6)	To be abandoned		Chatt. R.	Unknown	Not furnished
Camp Creek	7.5	A.S.	Camp Creek	Final planning underway	Not furnished
Grantville (7)	See Note (7)		Yellow Jacket Creek	Ind. waste being evaluated	July '71
Hogansville	0.50	A.S.	Yellow Jacket Creek	Construction completed	
LaGrange					
Hogansville Rd. Plant	0.25	T.F.	Yellow Jacket Creek	Improvements completed	
Blue John Cr. Plant	3.0	T.F.	Blue John Cr.	Completed prior to 7/66	
Yellow Jacket Cr. Plant	1.0	T.F.	Yellow Jacket Cr.	Construction completed	
Blue John Cr. Plant (Industrial waste)	2.5	A.S.	Blue John Cr.	Construction completed	
Lumpkin	Unknown		Hodchodkee Cr.	In preliminary planning stage	Not furnished
Marietta (8)					
East Side Plant	2.5	T.F.	Sope Creek	(8)	(8)
S.E. Side Plant	2.0	T.F.	Rottenwood Cr.	(8)	(8)
West Side Plant	1.0	T.F.	Wards Creek	(8)	(8)
South Side Plant	1.0	T.F.	Olley Creek	(8)	(8)

TABLE B- TABULATION ON WATER POLLUTION CONTROL PROGRESS AND PROGRAMS

COMMUNITY OR MUNICIPALITY	CONSTRUCTED OR PROPOSED TREATMENT		RECEIVING STREAM	ENGINEERING & CONSTRUCTION STATUS	ESTIMATED CONSTR. COMPLETED DATE, IF APPLICABLE**
	Design Capacity MGD	Type*			
Newman (9)					
Cotton Mill Br. (East)	To be abandoned		Cotton Mill Br.	Prelim. planning comp.	Not furnished
Snake Creek (North)	0.40	T.F.	Snake Creek	Completed prior to 7/66	
Mineral Springs Br.(West)	0.75	A.S.	Mineral Spr. Br.	Under construction	1970
Wahoo Creek	1.00	A.S.	Wahoo Creek	Prelim. planning	Not furnished
South Side Plant	0.04	A.S.	Mountain Cr.	Construction completed	
Palmetto	0.20	A.S.	Bear Creek	Contract tent. awarded	June '71
Pine Mountain	0.15	A.S.	Turkey Creek	Final plans completed	Not furnished
Smyrna (10)	0.40	T.F.	Bohannon Cr.	(10)	Not furnished
Union City (new system)	0.25	A.S.	Deep Creek	Constr. nearing completion	1970
Villa Rica					
North Plant	0.20	A.S.	Sweetwater Cr.	Construction completed	
West Point (11)	See Note (11)		Chatt. R.	Survey underway	July '71 (possibly)

*Effluent disinfection provided, or to be provided as appropriate. Refer to Table A for present treatment. Abbreviations used for treatment include:

A.S. -- Activated sludge or modification thereof.
T.F. -- Trickling filter, either low rate or high rate
P.P. -- Polishing pond
M.G.D. -- Million gallons per day.

**Recent dates furnished by owners or owner's consulting engineers in most cases.

NOTES:

(1) Sandy Creek plant is presently scheduled to be abandoned and flow diverted to Utoy Creek plant, for which funds have been budgeted in 1970. This is a change from an earlier plan to expand the Sandy Creek plant.

(2) Austell tentatively plans to abandon existing primary plant and connect to Cobb County's Sweetwater Creek plant.

(3) Flow to be diverted into the South Cobb plant.

(4) Flow to be diverted to Cobb County's Sweetwater Creek plant but no schedule presented for diversion sewers.

(5) Plant expansions and improvements to 3.0 MGD program to handle anticipated additional plant load. Present treatment is 0.75 MGD trickling filter plant.

(6) Plant abandonment proposed with flow diverted to Atlanta's Utoy Creek plant.

(7) Plant capacity and type contingent on whether a local industrial waste is included in treatment program. Design for sanitary sewage will be about 0.2 MGD.

(8) Indicated plant capacities are existing and plant loadings are subject to further evaluations. For intrastate pollution of small tributary receiving streams, which now flow through densely populated areas, either tertiary treatment or connection to programmed Cobb County sewer system improvements is considered necessary. No definite commitments have been made by the City.

(9) Newnan's Cotton Mill Branch plant is scheduled to be abandoned with construction of proposed Wahoo Creek, on which no firm schedule has been presented. New Mineral Springs Branch plant (under construction) will replace old Mineral Springs Branch plant.

(10) Indicated plant capacity is existing, but capacity and treatment are considered inadequate for small intrastate receiving stream. City has not made final decision on whether to abandon plant by connecting to the proposed Cobb County system or upgrade own facilities. A portion of Smyrna's wastewater is presently treated at Cobb County's Church Road plant.

(11) City plans to pump wastewater to West Point-Pepperell, Lannett, Alabama treatment facility. City's construction schedule for sewers and lift stations is contingent, to some extent, upon schedule for treatment facility.

RSH 167
y

CITY OF ATLANTA

CITY HALL ATLANTA, GA. 30303
Tel. 522-4463 Area Code 404

SAM MASSELL, MAYOR

DAN E. SWEAT, JR., Chief Administrative Officer
MRS. NORMA DAY, Executive Secretary

Janaury 29, 1970

Mr. R. S. Howard, Jr.
Executive Secretary
State Water Quality Control Board
47 Trinity Avenue, SW
Atlanta, Georgia 30334

Dear Mr. Howard:

I have received your letter of January 19, which regards the Chattahoochee River Enforcement Conference. While I will not be able to personally attend, our Water Pollution Control officials and consultants will be in attendance to represent the city's position.

I want you to know that I am personally committed to doing everything within our power to eliminate the pollution of our environment. I hope to talk to you soon about some specific ideas I have which might be helpful.

Sincerely,

Sam Massell

Sam Massell
Mayor

SM:sm
cc: Mr. Jack Cameron

RECEIVED
FEB [illegible] 1970
[illegible]
WATER QUALITY
CONTROL

KSH

CITY OF ATLANTA

CITY HALL ATLANTA, GA. 30303
Tel. 522-4463 Area Code 404

SAM MASSELL, MAYOR

DAN E. SWEAT, JR., Chief Administrative Officer
MRS. NORMA DAY, Executive Secretary

February 10, 1970

Mr. R. S. Howard
Georgia Water Quality Control Board
47 Trinity Avenue
Atlanta, Georgia 30334

RECEIVED
FEB 11 1970
GEORGIA
WATER QUALITY
CONTROL

Re: Chattahoochee River Enforcement
Conference

Dear Mr. Howard:

As requested in your letter of January 19, 1970, the following information is submitted concerning the Water Pollution Abatement Program by the City of Atlanta for the Chattahoochee River.

The City of Atlanta owns and operates three "Primary" type treatment plants on the Chattahoochee River. The R. M. Clayton Water Pollution Control Plant, the largest of the three plants, serves an area of 158 square miles. The Sandy Creek Plant serves an area of approximately 5 square miles, and the Utoy Creek Plant serves 32 square miles. In December of 1965, a report on Water Pollution Control for the Chattahoochee River was submitted to the City by Wiedeman and Singleton Engineers, recommending the secondary treatment facilities capable of achieving 85 percent treatment be provided at all three of Atlanta's plants on the Chattahoochee River.

Plans are now well underway to expand the R. M. Clayton Water Pollution Control Plant to a capacity of 120 MGD, with secondary treatment. Our records show these plans now to be 60 percent complete. The total cost of this facility is expected to be approximately $35,000,000. Because of the size of the plant, construction will take place under a number of contracts. The first contracts, totaling $3,500,000, were let approximately one year ago. It is anticipated that the second major construction in the amount of $4,000,000, will be let in the next few months. The third and largest contract, totaling approximately $17,000,000, is scheduled to be let around the end of this year. Our present schedule indicates that the secondary facilities will be in operation near the end of 1972.

The aforementioned report by Wiedeman and Singleton Engineers recommended expanding the Sandy Creek Plant to a capacity of 5 MGD, and the Utoy Creek Plant to a capacity of 12 MGD. Changes which have occurred since the writing of that report have caused us to alter our plans in regard to these two facilities. The site originally planned for the Sandy Creek Plant is no longer available for use. Studies have shown that it is economically feasible to pump the waste water from the Sandy Creek area to the Utoy Creek site for treatment, and funds have been budgeted for this year to provide the sewers and pump stations to accomplish this. Because of rapid development in the area tributary to the Utoy Creek Plant, we now plan to provide a capacity of 30 MGD at that facility. An application for a grant for this facility will be submitted to the Georgia Water Quality Control Board prior to May 15, 1970. Completion of the Utoy - Sandy Creek System is scheduled for the end of 1972.

We regret that circumstances beyond our control will not permit the City to meet the July 1971 deadline, which was made at the Chattahoochee River Enforcement Conference in July of 1966. We believe, however, that the facilities presently under design will be second to none in the country in efficiency and effectiveness. I will personally do everything within my power to accelerate where possible, the construction of the facilities described above.

I would again like to commend the Georgia Water Quality Control Board for their effective and energetic programs, and to thank you for the many courtesies which you and your staff have shown the City.

Sincerely,

Sam Massell

Sam Massell
Mayor

SM:sm

cc: Mr. J. W. Cameron
Engineer of Sewers

City of Austell **Georgia**
2722 BROAD ST., S. W.
ZIP CODE 30001
PH: 941-0228 - CITY HALL

RSH

February 9, 1970

R.S. Howard
Executive Secretary
Ga. Water Quality Control Board
47 Trinity Avenue
Atlanta, Georgia 30334

Re: Chattahoochee River Enforcement Conference

Dear Mr. Howard:

The following is a resume of corrective measures the City of Austell has taken to help abate Chattahoochee River Pollution.

We now have all of our Sewer pumping stations, clarifier, digester, and sand traps working properly and correctly. We have installed four 1500 gallon chlorination vats with proper controls and valves to chlorinate while sewer station is pumping.

Our system was designed for 500,000 gallons per day. We are only pumping a little over 175,000 gallons per day with all valves, pumps and other vital equipment working properly.

It is the City of Austell's intentions, at this moment, to join with Cobb County in their new sewer program that will be of valuable service to all of us.

We now have a full time sewer attendant working seven days per week to insure proper and correct operation of our sewer treatment plant.

Thanks for this opportunity to serve you and please come to see me when you can.

Yours truly,

R H Causey

R.H. Causey,
City Manager

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FEB 11 1970
GEORGIA
WATER QUALITY
CONTROL

RHC/gg

cc: W.W. Crunk

WIEDEMAN AND SINGLETON
ENGINEERS

1769 PEACHTREE ROAD, N. E.
ATLANTA, GEORGIA 30309
TELEPHONE 876-5862
AREA: 404

PARTNERS:
C. E. DRUMMOND, JR.
WM. J. GREENE, JR.
R. C. KAUFFMAN
JOHN H. WIEDEMAN
T. W. WIEDEMAN

ASSOCIATES:
L. H. CLOUSER
G. C. HORNSBY
C. Q. NEVITT
C. S. WHITE
W. E. WILLIAMS

February 13, 1970

RECEIVED
FEB 16 1970
GEORGIA
WATER QUALITY
CONTROL

Mr. R. S. Howard, Jr.
Executive Secretary
Georgia Water Quality Control Board
609 State Health Building
47 Trinity Avenue, S. E.
Atlanta, Georgia 30334

Re: Sewage Treatment Facility
Callaway Gardens
Pine Mountain, Georgia

Dear Mr. Howard:

Sewage from the various installations of the famous Callaway Gardens located at Pine Mountain, Georgia, has always received a certain degree of treatment. However, as certain of the installations at the Gardens, such as the Motel and cottages, increased in size and number, the sewage facilities serving these units became overloaded. The effluent from these facilities, one a small package type treatment plant, and the other, a septic tank with sand filter, discharged into Mountain Creek, a tributary of the Chattahoochee River.

This deficienty has been corrected by the construction of additional sewers and a sewage pumping station whereby all sewage is conveyed to one point where it is treated in a sewage treatment facility, originally constructed in 1964. Additions have been made in 1967 and 1969. The facility now consists of a bar screen, four aeration basins, two clarifiers, sludge recirculating pumps, a chlorine building, and a small tertiary pond. The facility has sufficient capacity to handle the present sewage load.

The operation of the facility is under the supervision of a full time employee, with the result being that a good effluent is being discharged into Mountain Creek.

We have presented the above at the request of the Ida Cason Callaway Foundation, the owner of the Callaway Gardens, and in response to your letter to said Foundation dated January 19, 1970.

Yours very truly,

WIEDEMAN AND SINGLETON

By: Wm J Greene

cc: Mr. William T. Cooksey
Secretary-Treasurer
Ida Cason Callaway Foundation
Pine Mountain, Georgia 31822

COBB COUNTY
COMMISSIONERS OF ROADS AND REVENUES
P. O. BOX [illegible]
MARIETTA GEORGIA

● ERNEST W. BARRETT, CHAIRMAN ● ROBERT J. AUSTIN, DEPUTY ● THOMAS H. BROWN ● T. L. DICKSON ● ERNEST P. ELLISON ● HARRY E. INGRAM

February 9, 1970

Mr. R. S. Howard, Jr.
Executive Secretary
State Water Quality Control Board
47 Trinity Avenue, S. W.
Atlanta, Georgia 30334

RE: Chattahoochee River
Enforcement Conference

Dear Mr. Howard:

Attached you will find our report covering the status of our Abatement Program for Cobb County, Georgia.

I will be in attendance at the conference on February 17, 1970.

If we can answer questions about our report, please contact us.

Sincerely yours,

Ernest W. Barrett

Ernest W. Barrett
Chairman

EWB/ng

cc: Robert L. Sutton, Jr.

RECEIVED

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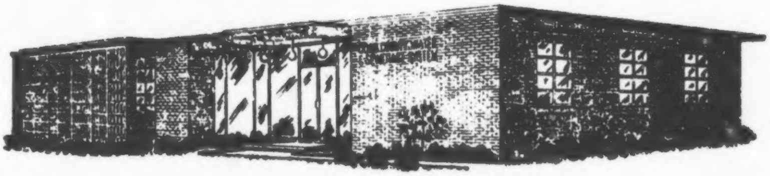
WATER QUALITY
CONTROL

ERNEST W. BARRETT
COMMISSIONER
ROBERT J. AUSTIN
DEP. COMMISSIONER
LOUIS WATTS
MANAGER
LEON G. McNEELY
OFFICE MANAGER

32 DISTRICT
HARRY INGRAM
T. L. DICKSON
33 DISTRICT
THOMAS H. BROWN
E. P. (DOC) ELLISON



COBB COUNTY WATER SYSTEM
680 SOUTH COBB DR., S. E. • P. O. BOX 529 • MARIETTA, GA. 30060

February 9, 1970

Progress of
Cobb County Water and Sewerage System
Toward
Pollution Abatement in Cobb County, Georgia
February 10, 1970

- - - - - - - - - -

In June 1969 the Cobb County Water and Sewerage System borrowed $23,000,000 needed to implement Phase A of the Comprehensive Sewer Study for Cobb County, Georgia dated February 1967. Copies of this study are attached as part of this Progress Report.

Upon receipt of the money, design by the Consulting Engineers for the County was begun. We have awarded our first contract for the construction of interceptor lines along Nickajack Creek with actual construction starting last week. The anticipated schedule of bidding calls for all the major interceptors and treatment facilities to be bid prior to July 1, 1970 with construction being completed prior to winter of 1972.

The lines and treatment plants to be constructed in Phase A of the Program will mainly construct the backbone of the entire system connecting existing temporary treatment facilities with the permanent facilities to be constructed. The construction of Phase A will remove from the Rottenwood, Nickajack and Sweetwater Creek any discharge from the Cobb County Water and Sewerage System that will be polluting these streams.

The Cobb County Water and Sewerage System is meeting its responsibilities toward the removal of pollution from the Chattahoochee through its construction program in Phase "A".

MILLS
TOCCOA, GA. ACWORTH, GA. DIXFIELD, ME.
ALBANY, GA. PELHAM, GA. NEWPORT NEWS, VA.
CLARKDALE, GA. THOMASVILLE, GA. WARREN, R. I.
RESEARCH - UNION, N. J.

COATS & CLARK INC.
430 PARK AVENUE, NEW YORK, N. Y. 10022. TEL. NO. 935-4700

February 9, 1970

RECEIVED
FEB 11 1970
GEORGIA
WATER QUALITY
CONTROL

Mr. R. S. Howard, Jr.
Executive Secretary
State Water Quality Control Board
47 Trinity Avenue, S.W.
Atlanta, Georgia 30334

Dear Mr. Howard:

At our request Mr. Guy Lowe, our Chief Engineer, forwarded to this office for reply your letter of January 20th, requesting a summary of the current status of our abatement program concerning pollution of the Chattahoochee River in the vicinity of our Clarkdale Mill.

For the information of the Georgia Water Quality Control Board, we would like to sketch the background of this situation before outlining our proposed action.

Coats & Clark does not wish to be classified with those companies paying mere lip service to cooperation with the Board in cleaning up Georgia's rivers and streams. As you know, in 1968 we completed the installation of purification facilities at our Toccoa Mill, and several years earlier at our Albany Mill, where the wastes consisted of manufacturing effluent as well as runoff from the Mill restrooms. At Clarkdale there is no such industrial effluent.

Several years ago, we engaged J. E. Sirrine Company to undertake detailed feasibility studies and to prepare plans and specifications for purification facilities at Clarkdale, which were completed and submitted to us. On June 6, 1967 Mr. W. B. Williams wrote us to advise that Cobb County had prepared a long range sewerage program, including a sewer line to which Clarkdale might connect, although the financing aspects made the timetable uncertain. He further advised that the Water Quality Control Board encouraged such connection to public lines where practical. Sirrine also favored this method of disposal. We held several meetings with the Cobb County Board of Commissioners and Hensley-Schmidt Co., their consulting engineers, in which the Company reached general agreement with the County to tie into their proposed sewer line at an annual charge far less costly to us than the construction of our own treatment facilities.

The wastes from our Clarkdale plant and the adjacent village, housing many of our employees, flow to a large Imhoff tank. The Sirrine

THE GREAT NAMES IN THREAD

plan involved interception of the waste flow above the Imhoff tank by a connection to the existing outfall sewer and conveying the flow by gravity to the proposed 21 inch county trunk sewer line. In October, 1968 we completed the sale of all our mill village houses to the employees and by agreement turned over to Cobb County the responsibility for the operation and maintenance of the water and sewerage systems. While our mill still discharges restroom wastes to the Imhoff tank, the County has primary responsibility for this facility.

As the next step, we will proceed promptly to arrange a meeting with the Cobb County Board of Commissioners to learn their current plans and timetable for extending the County sewer line to the Clarkdale property. We understand the County has obtained the financing for this project. If it appears that the line will not reach us for a long period of time due to the need for additional capital, we will explore methods of assisting the County with the financing, if that will make possible early completion of the extension. A coordinated plan for the Mill and the homes seems most desirable from both the standpoint of complete pollution control and the minimization of expense.

We are most anxious to cooperate fully with the Board for the common good of Coats & Clark, its employees and the citizens of Georgia.

Sincerely

COATS & CLARK INC.

W.A. Waller
Secretary

WAW:w

COLUMBUS WATER WORKS

COLUMBUS, GEORGIA

February 9, 1970

State Water Quality Control Board
47 Trinity Avenue, S. W.
Atlanta, Georgia 30334

ATTENTION: Mr. R. S. Howard, Jr.
Executive Secretary

Re: Chattahoochee River Enforcement Conference

Gentlemen:

Your letters dated January 19 and January 21 regarding the Enforcement Conference on the Chattahoochee River to be reconvened on February 17, 1970, at 9:30 a.m. at the Atlanta Civic Center was received. The Board of Water Commissioners authorized their consulting engineers, Robert and Company Associates, to provide an engineering report as well as preliminary drawings of the proposed secondary treatment addition to the South Columbus Sewage Treatment Plant. The report and plans, along with an application for a federal grant, were filed with your office in May of 1968.

We are most anxious to cooperate in providing secondary treatment in Columbus, but, as you know, financing locally, as well as on the state and national level, becomes somewhat of a problem. In the near future, if the bond market permits, the Board of Water Commissioners will be required to expand the facilities at an estimated cost in excess of seven million dollars which will necessitate a rate increase in Columbus of approximately 38% to all customers.

You can be assured of our cooperation, but, as you know, the advisability of marketing bonds at the present time is questionable. Therefore, we are not in a position to establish a firm date for our secondary treatment addition.

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FEB 11 1970
GEORGIA
WATER QUALITY
CONTROL

We will attend the Conference, along with our consulting engineer, on February 17, and we assure you of our continued cooperation.

Yours very truly,

BOARD OF WATER COMMISSIONERS

J. T. King

J. T. King
Secretary

JTK:pgq

WIEDEMAN AND SINGLETON
ENGINEERS

PARTNERS:
C. E. DRUMMOND, JR.
WM. J. GREENE, JR.
R. C. KAUFFMAN
JOHN H. WIEDEMAN
T. W. WIEDEMAN

1789 PEACHTREE ROAD, N. E.
ATLANTA, GEORGIA 30309

TELEPHONE 876-5862
AREA: 404

ASSOCIATES:
L. H. CLOUSER
G. C. HORNSBY
C. Q. NEVITT
C. S. WHITE
W. E. WILLIAMS

February 13, 1970

RECEIVED
FEB 16 1970
WATER QUALITY

Mr. R. S. Howard, Jr.
Executive Secretary
Georgia Water Quality Control Board
609 State Health Building
47 Trinity Avenue, S. E.
Atlanta, Georgia 30334

Re: Proposed Sewage Treatment
Douglasville, Georgia

Dear Mr. Howard:

Reference your letter of January 19, 1970 to the City of Douglasville, Georgia, the City has requested that this office advise you of the status of their sewage abatement program.

Financing the proposed work is the major problem. The Federal Grant requested from the Federal Water Pollution Control Administration through your office will be absolutely necessary to assist in financing the project. The City is presently checking into the matter of financing their portion of the total project cost.

Construction plans and specifications have not been started as yet. However, as you have been previously advised, the City can acquire a site on which to locate the proposed treatment facility. Also, since the application for the grant has been filed we have found from others of our projects now under construction that a sewage oxidation ditch can be constructed for less money than originally set out in the City of Douglasville's application. This will definitely benefit the City in its financing.

The City will be able to complete the construction of the proposed interceptor sewer and sewage treatment facility by June 30, 1971 provided it receives the Federal grant and works out its own financial matters within the next three to four months.

Yours very truly,

WIEDEMAN AND SINGLETON

By:

cc: Mr. Ben M. Beall
City Clerk
Douglasville, Ga.

W. R. JORDAN, JR.
CHARLES H. JONES
RANDOLPH GOULDING

JORDAN, JONES AND GOULDING, INC.

SUITE 116
1655 TULLIE CIRCLE, N.E. • ATLANTA, GEORGIA 30329
634-5197

CONSULTING ENGINEERS

February 4, 1970

RECEIVED
FEB 6 1970
GEORGIA
WATER QUALITY
CONTROL

Mr. R. S. Howard, Jr.
Executive Secretary
Georgia Water Quality Control Board
47 Trinity Avenue, S.W.
Atlanta, Georgia 30334

Re: City of Fairburn
Waste Treatment Facility
Chattahoochee River Encroachment Conference

Dear Mr. Howard:

The City of Fairburn has requested that we advise you concerning the progress of their pollution abatement program in the Chattahoochee River Basin.

Approximately one-half of the City's sewage discharges into the Deep Creek, which is a tributary of the Chattahoochee River. Construction was begun on September 16, 1969, on a new 220,000 gallon-per-day treatment plant to replace the existing plant. Construction is approximately 75% complete. The estimated completion date is June 14, 1970. This new plant will provide secondary treatment and has the capacity to provide for a minimum of ten years future growth.

If we can provide you with any additional information, please let us know.

Very truly yours,
JORDAN, JONES AND GOULDING, INC.

Charles H. Jones

Charles H. Jones

CHJ/sp
C. C. TO: Hon. A.J. Green

State Water Quality Control Board
47 Trinity Avenue, S. W.
Atlanta, Georgia 30334

February 3, 1970

David B. Conrad
Colonel, CE
Post Engineer
Fort Benning, Georgia 31905

Re: Chattahoochee River Enforcement Conference

Dear Sir:

Thank you for your letter of 26 January 1970 to Mr. R. S. Howard, Jr. which has been referred to the writer for reply.

The reference in our letter of 19 January 1970 to the Savannah River was in error and should have read the Chattahoochee River.

The first session of the Federal Enforcement Conference was held in 1966 at which time the record showed that Fort Benning had two plants with only primary treatment although secondary treatment was under construction. Since the Rules of the Georgia Water Quality Control Board requires secondary treatment, Fort Benning was cited as contributing toward the pollution of the Chattahoochee River. Also, the Chattahoochee River in this area is an interstate stream and comes under the enforcement jurisdiction of the Federal Water Pollution Control Administration, Department of Interior. The State of Georgia established stream standards for all interstate streams and a requirement of these standards was that a minimum of secondary biological treatment, or equivalent, must be provided for all wastewater discharges to such interstate waters. As required by Federal law, our standards were approved by the Department of Interior and hence have the effect of Federal law.

We understand that Fort Benning now provides secondary treatment for all wastewater discharges with disinfection of the effluents except that the discharge from the Harmony Church plant is not chlorinated before discharge. We understand from Mr. Walter H. Sheffield, sanitary engineer, 3rd Army, that the discharge from the Harmony Church plant effluent travels a considerable distance in a stream on government property before leaving the reservation and reaching the Chattahoochee River. He further states that tests have been run to ascertain the necessity for disinfecting (chlorinating) the effluent.

In view of the preceding, we would appreciate a letter from you stating that all wastewaters from Fort Benning receive secondary treatment giving dates of plant completion as appropriate. Also, please state that the effluents are also disinfected except for the Harmony Church plant and you may wish to submit bacteriological and other data to indicate that such disinfection for this discharge is unnecessary. You are also at liberty to furnish laboratory data on plant performances and quality of effluents. In other words, we wish to document the record for the second session of this Conference as to the status of wastewater treatment at Fort Benning and, if possible, let the record show that Fort Benning is in satisfactory compliance with State and Federal treatment requirements and Conference directives. Your attention is invited to the attached Conclusions and Recommendations of the Conference, particularly Items 6, 7 and 9.

We shall await your reply and again invite you and/or other Army representatives to attend the Conference and to make formal statements on behalf of Fort Benning if you desire.

Sincerely,

W. B. Williams, Director
Planning and Development

WBW:rb

cc: Mr. Walter H. Sheffield

Enclosure

DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY INFANTRY CENTER
FORT BENNING, GEORGIA 31905

AJIEN

5 February 1970

Mr. W. B. Williams, Director
Planning and Development
State Water Quality Control Board
47 Trinity Avenue, S. W.
Atlanta, Georgia 30334

RECEIVED
FEB 9 1970
GEORGIA
WATER QUALITY
CONTROL

Dear Mr. Williams:

Your letter of 3 February 1970 confirming the incorrect reference to the Savannah River is appreciated. I am also pleased that the cite to which you and Mr. Howard have referred is the acknowledgement that Fort Benning did not have secondary treatment for two plants at the time of the meeting in 1966 but that such plants were under construction.

The State Water Quality Control Board should have been informed in April 1967 that Fort Benning had met the provisions of paragraphs 9 and 6 of the Conference's "Conclusions and Recommendations." Our obligation to provide secondary treatment was completed four years and three months before the deadline established in paragraph 7 by the Conference.

It would appear desirable that your conference this year include discussions of a reporting system to remain current on major changes of pollution contributing facilities. I think Fort Benning should have informed the State Water Quality Control Board three years ago that we had finished our secondary treatment plants.

Information on our sewage treatment plants is available in Third Army, and inasmuch as our funds have been curtailed so drastically, I presume Third Army's representative will provide whatever information is needed regarding our plants at your meeting.

We do sincerely appreciate your invitation, and particularly express our concern in solving pollution problems. Your Board and its efforts will always be supported by this Post in any way possible.

Thank you very much for helping to set our record straight.

Very truly,

David B Conard

DAVID B. CONARD
Colonel, CE
Post Engineer

Copy furnished:
Third Army Engineer
Director of Logistics, USAIC

DAVID WETHERBY, MAYOR
MRS. MORGAN BRADY,
CLERK AND TREAS.

FINANCE COMMITTEE
R. H. MORRIS, CHAIRMAN
J. W. BENNETT, VICE CHAIRMAN
JAMES A. BROWN

CITY OF FORT GAINES, GEORGIA
OFFICE OF CLERK AND TREASURER
FORT GAINES, GEORGIA

COUNCILMEN
CARL CHILDS
J. E. COLEMAN
HERBERT McKISSACK
J. W. BENNETT
R. H. MORRIS
JAMES A. BROWN

February 13, 1970

R. S. Howard, Jr.
Executive Secretary
State Water Quality Control Board
47 Trinity Avenue, S. W.
Atlanta, Georgia 30334

Re: Chattahoochee River Enforcement Conference

Dear Mr. Howard.

In reply to your letter of January 19,1970. We requested that our engineers, Robert and Company Associates, submit the present status of our Water and Sewerage Treatment Facilities Program now under way. If this information is not satisfactory, please advise.

Sincerely,

David Wetherby MB

Mayor

DW/mb

cc: Roberts and Company Associates

RECEIVED
FEB 16 1970
GEORGIA
WATER QUALITY
CONTROL

RSH

RECEIVED
JAN 26 1970

January 23rd, 1970

Hon. C. S. Smith, Mayor
City of Grantville
City Hall
Grantville, Georgia 30220

Re: Chattahoochee River
Enforcement Conference

Dear Mayor Smith:

In answer to Mr. R. S. Howard, Jr.'s letter of January 19th, 1970, as far as the Engineering is concerned:

1. Preliminary surveys for sewers and sewage treatment and disposal facilities are complete.

2. Preliminary planning for sewers and sewage treatment and disposal facilities are complete.

3. The Engineers are presently making studies of the Grantville Mill waste to determine if the proposed sewerage system can accept the untreated discharge of the Mill or if pre-treatment is necessary. As the Mill waste is a large precentage of the total waste from the City, this is quite important.

It is our understanding that the 100% FHA financing is secured and the project could be under construction this summer.

January 23rd, 1970

Continued:

Should there be any further questions or comments please do not hesitate to call or write to us.

Yours truly,

J. B. McCRARY ENGINEERING CORP.

W. H. Hester,
Chief Design Engineer

WHH/nb

cc: ✓R. S. Howard, Jr.
State Water Quality Control Board

COPY

February 13, 1970

Mr. W. H. Hester
J. B. McCrary Eng. Corp.
841 Dekalb Industrial Way
Decatur, Ga. 30033

Dear Mr. Hester:

This is to confirm that the City of Grantville is delegating the J. B. McCrary Engineering Corporation the power to speak for our city in matters relating to stream pollution abatement.

We appreciate your consideration in this matter.

Very truly yours,

CITY OF GRANTVILLE

C. S. Smith,
Mayor.

CSS/mjb
cc: Mr. R. S. Howard, Jr. ✓

City of Grantville

GRANTVILLE, GEORGIA

February 13, 1970

Mr. R. S. Howard, Jr.
State Water Quality Control Board
47 Trinity Avenue, S. W.,
Atlanta, Ga. 30334

Dear Mr. Howard:

Enclosed you will find a copy of a letter to J. B. McCrary Engineering Corporation which is self explanatory. Also, it seems now that the City of Grantville's sewage treatment facilities will be complete by July 1, 1971.

If you should need any further information, please let us know.

Very truly yours,

CITY OF GRANTVILLE

C. S. Smith

C. S. Smith,
Mayor.

CSS/mjb

RECEIVED
FEB 16 1970
GEORGIA
WATER QUALITY
CONTROL

188

WIEDEMAN AND SINGLETON
ENGINEERS

PARTNERS:
C. E. DRUMMOND, JR.
WM. J. GREENE, JR.
R. C. KAUFFMAN
JOHN H. WIEDEMAN
T. W. WIEDEMAN

1789 PEACHTREE ROAD, N. E.
ATLANTA, GEORGIA 30309

TELEPHONE 876-5862
AREA: 404

ASSOCIATES:
L. H. CLOUSER
G. C. HORNSBY
C. Q. NEVITT
C. S. WHITE
W. E. WILLIAMS

February 13, 1970

RECEIVED
FEB 16 1970
GEORGIA
WATER QUALITY
CONTROL

Mr. R. S. Howard, Jr.
Executive Secretary
Georgia Water Quality Control Board
609 State Health Building
47 Trinity Avenue, S. W.
Atlanta, Georgia 30334

Re: Sewage Treatment Facility
Hogansville, Georgia

Dear Mr. Howard:

The City of Hogansville, Georgia, at the time of the July 14-15, 1966 conference on the elimination of the pollution from the Chattahoochee River, was discharging its sewage untreated into Yellow Jacket Creek, a tributary of the Chattahoochee River.

Since 1966 the City has completed the construction of an interceptor sewer along Yellow Jacket Creek and a 0.5 MGD Sewage Oxidation Ditch, complete with a clarifier, a chlorine contact tank, a laboratory and chlorine building and two sludge lagoons. This facility was placed in operation last fall. It is under the supervision of a City employee who was the resident engineer on the project during its construction. The facility is operating satisfactorily and discharging an effluent with a high degree of treatment into the Yellow Jacket Creek.

The City requested this office to reply to your letter of January 19, 1970 regarding the status of their pollution abatement program.

Yours very truly,

WIEDEMAN AND SINGLETON

By: W J Greene

cc: Mrs. Elizabeth I. Askew
City Clerk
Hogansville, Georgia 30230

J. GARDNER NEWMAN
MAYOR
H. B. LOVVORN
CITY MANAGER
V. E. DICKINSON
CITY CLERK & TREASURER

City of LaGrange

LaGrange, Georgia 30240

COUNCILMEN
RAYMOND W. FORT
J. A. HESTER
G. L. WOOD, JR.
ROBERT C. BUCHANAN
T. W. GODFREY, JR.
EDWIN M. GORE

January 26, 1970

RECEIVED
JAN 28 1970
GEORGIA
WATER QUALITY
CONTROL

Mr. R. S. Howard, Jr.
Executive Secretary
State Water Quality Control Board
47 Trinity Avenue, S.W.
Atlanta, Georgia 30334

Re: Chattahoochee River Water
Pollution Enforcement
Conference

Dear Mr. Howard:

As directed in your letter of January 19, 1970, the City of LaGrange submits the following progress report of its efforts to abate pollution in the Chattahoochee River which originates from LaGrange, Georgia.

LaGrange is located in two main drainage areas of the Chattahoochee River, one the Blue John Creek drainage area and the other the Yellow Jacket Creek drainage area which has a secondary runoff system know as Shoals-Beech Creek area. All these streams are tributaries of the Chattahoochee River.

At the time of the first water pollution enforcement conference on the Chattahoochee River, domestic waste and some industrial waste from the Blue John Creek drainage area was given secondary treatment in the Blue John Creek Sewage Treatment Plant which was constructed in 1952. However, the waste from the industrial complex located in Southwest LaGrange emptied untreated into Blue John Creek. Domestic waste originating from the Yellow Jacket Creek drainage area was emptied into Yellow Jacket Creek without treatment. The sewage originating in the Shoals-Beech Creek drainage area was given secondary treatment at the Hogansville Road Sewage Treatment Plant which was built in 1938. This plant, not fully loaded in 1966, needed modification and modernization.

In 1965, the citizens of LaGrange through its Mayor and Council adopted a Water Pollution Abatement Program which when completed was designed to adequately treat all waste originating in LaGrange and emptying into the tributaries of the Chattahoochee River.

Phase I of the Pollution Abatement Program was completed in August 1967, when Yellow Jacket Sewage Treatment Plant, a one MGD trickling filter plant was put into operation. This plant provides secondary treatment to waste originating in the Yellow Jacket Creek drainage area not treated in the Hogansville Road Plant.

Phase II of the Program was completed in 1968 when Blue John Creek Industrial Waste Treatment Plant was placed into service. This plant is an extended aeration plant and provides secondary treatment to all industrial waste originating in Southwest LaGrange. Completion of this plant along with its collection system provided complete treatment of all known waste originating in the Blue John Creek drainage area.

Phase III of the abatement program was completed in June, 1968 when modifications such as installation of aerobic digester, replacing chlorination equipment and other equipment was completed at the Hogansville Road Plant. This provides secondary treatment of all waste originating in the Shoals-Beech Creek drainage area.

The three phases of construction complete the Water Pollution Abatement Program adopted by the Mayor and Council and citizens of LaGrange in 1965. The treatment facilities have been operating efficiently and the waste insofar as we are able to determine is treated in accordance with the requirements of the State Water Quality Control Board. A program of testing and monitoring the effluent from these various treatment facilities has been continued by the City of LaGrange to assure that treatment complys with state requirements.

We request that this statement be made a part of the records of the second conference on pollution of interstate waters in the Chattahoochee River to be held February 17, 1970 at 9:30 A.M. in Atlanta Civic Center, Room 201, 395 Piedmont Avenue, N.E., Atlanta, Georgia.

Unless you so desire we see no reason to make an oral statement at this conference.

Yours very truly,

H. B. Lovvorn
City Manager

HBL/csh

cc: Mr. J. G. Newman, Mayor
Mr. William H. Merriam
Georgia Water Quality Control Board-4

City of Marietta
Marietta, Georgia

February 12, 1970

RECEIVED
FEB 16 1970
GEORGIA
WATER QUALITY
CONTROL

Mr. R. C. Howard
State Water Quality Control Board
47 Trinity Avenue, S. W.
Atlanta, Georgia 30334

Dear Mr. Howard:

In reference to your letter of January 16th, I wish to report the following improvements to the operation of the five (5) treatment plants of the City of Marietta Board of Lights and Water Works since the 1966 Chattahoochee River Conference.

The Board has employed a full-time chemist to monitor the plants operations on a full-time basis. The form submitted monthly to the State Water Quality Control Board is complete and as accurate as a chemist can do it. He is not spared any equipment he may need nor the cooperation necessary to accomplish his duties.

One of the older plants has had a grit chamber update and enlargement and all the timber replaced in the clarifier drags. A new chlorine contact chamber has also been added.

Of course, we recognize the accepting streams for our effluent are in several months of the year of very low flow. In fact, the effluent doubles the size of the accepting stream. However, the discharge points are several stream miles away from the Chattahoochee River travelling through rocks and rugged terrain on their way to the river, therefore offering a great deal of natural replacement of oxygen.

The Board would appreciate a review by the Water Quality Control Board of our operating techniques, physical plant facilities, and the control techniques we have.

The parties responsible for instigating a Chattahoochee Conference should be commended sounding out constructive improvements in the quality of our streams and rivers. The Marietta Board of Lights and Water Works stands ready and willing to cooperate in any program to accomplish the desired end -- clean water.

Sincerely,

James R. Hunter
Mayor

JRH:bg
cc: Walter J. Brown, City Manager
Don White, Director of Public Works
W. B. Lambert, Superintendent

B. L. SMITH, Treas.
[redacted]

Commissioners
EDGAR B. HOLLIS, Chairman
J. T. HAYNES
A. P. MANN

CARL MILLER, Gen'l. Supt.
[redacted]
J. A. LANDERS, Ass't. Supt.
T. A. COPELAND, Ass't. Supt.

NEWNAN WATER and LIGHT COMMISSION

NEWNAN, GEORGIA

February 4, 1970

RECEIVED
FEB 6 1970
GEORGIA
WATER QUALITY
CONTROL

Mr. R. S. Howard, Executive Secretary
State Water Quality Control Board
47 Trinity Avenue, S. W.
Atlanta, Georgia 30334

Re: Chattahoochee River
Enforcement Conference

Dear Mr. Howard:

This is in response to your letter of January 19, 1970 which deals with the Enforcement Conference to be reconvened on February 17, 1970. We thank you for your cordial invitation to attend and we hope that one or two of our group may find it possible to be there.

You make reference to Newnan being cited for interstate pollution of the Chattahoochee River. As we recall, this was a general citation covering a rather extensive number of cities. We believe that the inefficiency of our existing Mineral Springs Branch Plant (we think it was one of the first two treatment plants built in Georgia) was principally responsible for Newnan being cited at that time.

As you know, we completed in 1966 our Southside Extended Aeration Treatment Plant and now have under construction, and scheduled to be completed this summer, a 750,000 gallon modern extended aeration plant. When this system, which is located 4-1/2 miles downstream from the old Mineral Springs Branch Plant, is put in operation, it will almost wholly relieve and correct the pollution for which we were formerly cited.

We plan to construct a one million GPD extended aeration plant on Wahoo Creek as soon as the engineers have finished their work and the necessary financing becomes available. The Commission now owns a 20-acre site on Wahoo Creek and expects the preliminary aerial survey and maps to be completed during the present month of February. Wiedeman and Singleton, Engineers, have been engaged to furnish detailed plans and specifications on which work will begin when the maps from the aerial survey are furnished to them. At this time, you will understand that we can not definitely know the date construction may begin. It is definite, however, that the project is on our calendar and we mean to pursue it as vigorously as possible.

Best regards.

Yours very truly,

NEWNAN WATER & LIGHT COMMISSION

Edgar B Hollis

Edgar B. Hollis, Chairman

EBH/sw

January 23rd, 1970

RECEIVED

Hon. Lynn B. Bradley, Mayor
City of Palmetto
City Hall
Palmetto, Georgia 30268

Re: Chattahoochee River
Enforcement Conference

Dear Mayor Bradley:

In answer to Mr. R. S. Howard, Jr.'s letter of January 19th, 1970, as far as Engineering is concerned:

Bids have been received and contracts have been tentatively awarded for the construction of sewerage improvements including the construction of a sewage treatment plant.

The Engineers are preparing contract documents for validation by the City and the Contractors in order to make formal contract awards.

Yours truly,

J. B. McCRARY ENGINEERING CORP.

W. H. Hester,
Chief Design Engineer

WHH/nb
cc: ✓R. S. Howard, Jr.
Water Quality Control Board

L.B. BRADLEY, Mayor

Councilmen:
JAMES T. BULLARD, Mayor Pro Tem
GARFIELD CANNON
MARVIN DENNIS
MRS. E.B. HUTSON
C. FRED KEARNS
HARRY SLAUGHTER

CITY OF PALMETTO
PHONE: CITY HALL 463-3377
PALMETTO, GEORGIA
30268

LINDA DEAN, City Clerk
WILLIAM H. WINGO, Chief of Police
TOMMIE BARGE, Police
W.M. WILLIAMS, Police
WILLARD BURNHAM, Police
JOHN SMITH, Fire Chief
REX LASTER, Ass't. Fire Chief

February 13, 1970

J. B. McCrary Engineering Corp.
641 DeKalb Industrial Way
Decatur, Ga.

Re: Chattahoochee River
Enforcement Conference

Dear Mr. Hester:

Reference is made to your letter of Jan. 12, 1970, concerning above subject.

Please accept this letter as your authority to speak for the City of Palmetto in all matters concerning stream pollution abatement.

Also, all statements in your letter to me on Jan. 23, 1970 are correct.

Yours very truly,

L. B. Bradley ld

L. B. Bradley, Mayor
CITY OF PALMETTO, GA.

LBB/ld
cc: Mr. R. S. Howard

RECEIVED
FEB 16 1970
GEORGIA
WATER QUALITY
CONTROL

OFFICE OF THE MAYOR AND RECORDER
Town Of Pine Mountain
PINE MOUNTAIN, GEORGIA

January 23, 1970.

State Water Quality Control Board,
47 Trinity Avenue, S.W.
Atlanta, Ga. 30334

Gentlemen:

Re: Chattahoochee River
Enforcement Conference

In reply to your letter of January 19, 1970. We have made plans, application for loan etc., to make secondary treatment for our sewerage plant. Our engineers, Delta Engineering Company we feel sure will attend the conference February 17, 1970 and furnish you with all the details.

Yours truly,

O E White
O. E. White
Mayor

RECEIVED
JAN 26 1970
GEORGIA
WATER QUALITY
CONTROL

MAYOR
[illegible] SMITH
[illegible] CLERK
[illegible] W. CHARLES
CITY ATTORNEY
[illegible] W. [illegible]

City of Smyrna
SMYRNA, GEORGIA, 30080
PHONE 43[illegible]
Fastest Growing City in the South

COUNCIL
ARTHUR T. BACON
[illegible] BLACK
[illegible]
HOMER KUHL
J. C. P[illegible]
MARSTON TUCK
J. P. WHITE

RECEIVED
FEB 11 1970
GEORGIA
WATER QUALITY
CONTROL

February 9, 1970

Mr. R. S. Howard, Jr., Executive Secretary
Georgia Water Quality Control Board
47 Trinity Avenue, S. W.
Atlanta, Georgia 30334

Re: Chattahoochee River
Enforcement Conference

Dear Mr. Howard:

Your letters of January 19, 1970 and January 21, 1970 regarding the above referenced conference have been received. As requested we are summarizing our actions on pollution abatement since the 1966 Conference.

The main items of our pollution abatement program are listed below:

1. Collection sewers have been maintained, with a number of extensions added to serve the needs of our increasing population.
2. Sewage from the northeast area of Smyrna continues to be treated at the Church Road Treatment Plant, which is operated by Cobb County, Georgia.
3. Sewage from the Southwest andEast Side areas of Smyrna continue to be treated at the Bohannon Creek Treatment Plant, which the City of Smyrna operates.
4. Hensley-Schmidt, Inc., Consulting Engineers, were retained to prepare a report on treatment facilities required to serve proposed apartment development on the East Side of Smyrna. This report was submitted to Georgia Water Quality Control Board in September, 1969, but no comments have yet been received.
5. Planning and construction of outfall sewers and expansion of treatment plant facilities has been held in abeyance pending the outcome of negotiations with Cobb County to receive and treat the City of Smyrna sewage in the extensive sewerage works they are planning.

Since 1966 the City of Smyrna has been faced with two alternates in treatment of its increasing volume of sewage. Alternate #1 is to enter an agreement with Cobb County, Georgia whereby they would receive and treat sewage for the City of Smyrna. Alternate #2 is to expand our Bohannon Creek Treatment Plant and construct a new East Side Treatment Plant. Since the City of Smyrna is completely surrounded by Cobb County we felt it imperative to fully explore Alternate #1 before proceeding with Alternate #2.

The Cobb County Sewerage program, originally announced in detail in 1967, encountered unexpected delay due to various reasons, including financial difficulties in the sale of their bonds. Until late 1969, no rate proposal for treatment of City of Smyrna sewage was available from Cobb County. During this period from 1967 to late 1969, the City of Smyrna has been in a situation of not being able to evaluate which sewage treatment alternate was best and most economical for its residents.

The rate of 36 cents per 1,000 gallons which Cobb County proposed in late 1969, for treatment of Smyrna sewage, appears unreasonably high to us. Since that time we have been negotiating with Cobb County for a lower rate. No agreement on rate has been reached at this time.

If no agreement on a reasonable rate can be reached, the City of Smyrna has no recourse but to proceed with expansion and new construction of its own sewage treatment facilities. The City of Smyrna realizes its responsibilities in regard to sewage treatment and has been attempting in the past years to accumulate financial reserves to help meet these needs. If after a reasonable period we are still unable to negotiate a fair rate with Cobb County, Georgia, we will authorize our consulting engineers to proceed with plans and specifications for the required additional sewage treatment facilities.

We respectfully submit that the City of Smyrna, Georgia has acted in good faith in complying with the 1966 Conference directives, but has been seriously hampered in bringing its pollution abatement program to fruition because of delay and uncertainty of rates of the Cobb County Sewerage program.

We anticipate our best course of action will be evident shortly, and enable the new administration of the City of Smyrna to proceed with an effective pollution abatement program.

Very truly yours,

Harold L. Smith
Mayor

HLS:mw
cc: Honorable C. O. Canada
Mr. Jim David
Mr. Les Charles

WIEDEMAN AND SINGLETON
ENGINEERS

PARTNERS:
C. E. DRUMMOND, JR.
WM. J. GREENE, JR.
R. C. KAUFFMAN
JOHN H. WIEDEMAN
T. W. WIEDEMAN

1789 PEACHTREE ROAD, N. E.
ATLANTA, GEORGIA 30309

TELEPHONE 876-5862
AREA: 404

ASSOCIATES:
L. H. CLOUSER
G. C. HORNSBY
C. Q. NEVITT
C. S. WHITE
W. E. WILLIAMS

February 13, 1970

RECEIVED
FEB 16 1970
GEORGIA
WATER QUALITY
CONTROL

Mr. R. S. Howard, Jr.
Executive Secretary
Georgia Water Quality Control Board
609 State Health Building
47 Trinity Avenue, S. E.
Atlanta, Georgia 30334

Re: Proposed Sewage Treatment
West Point, Georgia

Dear Mr. Howard:

We have been authorized by the City of West Point, Georgia, to reply to your letter of January 19, 1970 to said City pertaining to the status of their pollution abatement program. No work has been done as of this date, although the City is very cognizance of this problem and will proceed as soon as it sees that the project can be financed. A grant from the Federal Water Pollution Control Administration, an application for which has already been filed with your office, will definitely be necessary in order that the financing can become a reality.

The City's sewage will be treated in the proposed treatment facility of the West Point-Pepperell, Inc. to be located on the Chattahoochee River in Alabama just across the Georgia-Alabama State Line. Actual construction has not been started on this sewage treatment facility. The West Point-Pepperell, Inc. has agreed to treat the City of West Point's sewage, but the actual contract between the two parties has not been executed.

It is anticipated that construction of the two interceptor sewers and two sewage pumping stations can be completed by June 30, 1971, assuming the Federal Grant is forthcoming in the very near future. However, difficulty may be experienced by the Contractor in constructing the interceptor sewer on the west side of the River due to its depth and the bad subsurface conditions that exist. This could require additional construction time.

Yours very truly,

WIEDEMAN AND SINGLETON

By:

WJGjr/cg
cc: Mr. J. F. Meadors
City Administrator
West Point, Ga.

200-A

ROBERT AND COMPANY ASSOCIATES
Engineers

96 POPLAR STREET, N. W. ATLANTA 3, GEORGIA

February 10, 1970

RECEIVED
FEB 11 1970
GEORGIA
WATER QUALITY
CONTROL

Mr. R. S. Howard, Jr., Executive Secretary
State Water Quality Control Board
47 Trinity Avenue, S.W.
Atlanta, Georgia 30334

Dear Mr. Howard:

In reply to your letter of January 19, 1970 addressed to the City of Fort Gaines, Fort Gaines, Georgia, and in the interest of our Client, the City of Fort Gaines, we submit the status of their pollution abatement program.

Following the submission of the report dated October 1967 and its supplement dated May 1968 which defined the scope of the project, the City sought Federal aid for construction. Applications were submitted to both the Federal Water Pollution Control Administration and the Department of Housing and Urban Development.

Subsequently the applications received considerable review with requests by the reviewing agencies for additional or revised data and supplemental statements. Notification was given by the State Water Quality Control Board that no Federal aid funds were available. Early during the past year, notification was received that both a grant and loan were approved by the Department of Housing and Urban Development. These are assigned Project Nos. of PFL-GA-144 and WS-GA-86. Later in the year, the City was again advised that no funds were available under Public Law 660. Later in the year notification was received that a grant by the Economic Development Administration had been approved. This was assigned Project No. 04-1-00694 and completed the general financing of the project. A Planning Conference was arranged and held in Fort Gaines on November 18, 1969.

By letter dated December 5, 1969, the City of Fort Gaines has authorized its engineer, Robert and Company Associates, to proceed with preparation of plans and specifications for the project. These are now in preparation.

Mr. R. S. Howard, Jr.
February 10, 1970
Page Two

We trust that this provides the required information. Should further clarification be desired, it will be provided promptly upon request.

Very truly yours,

ROBERT AND COMPANY ASSOCIATES

J H Bauer

J. H. Bauer

JHB:jc

cc: Dr. David Wetherby, Mayor
Mr. Theodore T. Molnar, Attorney

H. WILSON HAWTHORNE, N.S.P.E.
HARRY B. ENNIS, N.S.P.E.
MERVIN L. BOTTS, N.S.P.E.
BOBBY R. HOBBS, R.L.S.

ENGINEERS
SURVEYORS
PLANNERS

delta associates, inc.
1131 16th Avenue • Columbus, Georgia • Telephone 404 - 324-5689

200-C

February 9, 1970

RECEIVED
FEB 10 1970
GEORGIA
WATER QUALITY
CONTROL

State Water Quality Control Board
47 Trinity Avenue, S. W.
Atlanta, Georgia 30334

Attn: Mr. W. B. Williams

Re: Pine Mountain Sewerage

Gentlemen:

For your information, we are submitting on behalf of the Town of Pine Mountain the current status and estimated time for completion for the proposed secondary treatment facility.

Final Plans & Specifications and Permit to Construct --- 21 days

Advertisement and Award of Contract --- 30 days

Construction time --- 150 days

The plans and specifications are essentially complete and will be submitted to your office within 10 days.

Hoping this meets with your approval.

Very truly yours,

Mervin L Botts

Mervin L. Botts

MLB/gb

cc: Dixon Olive
Mayor O. E. White

P. O. BOX 5113
COLUMBUS, GA. 31906

P. O. BOX 215
PHENIX CITY, ALA. 36867

200-D

ROBERT AND COMPANY ASSOCIATES
Engineers
96 POPLAR STREET, N. W. ATLANTA 3, GEORGIA

February 13, 1970

RECEIVED
FEB 17 1970
GEORGIA
WATER QUALITY
CONTROL

Mr. Ralph S. Howard, Jr.
Executive Secretary
Water Quality Control Board
47 Trinity Avenue, S. W.
Atlanta, Georgia 30303

Re: Fort Gaines, Georgia

Dear Mr. Howard:

Supplementing our letter of February 10, 1970 relative to the status of the Fort Gaines project, WS-GA-86; PFL-144 and 04-1-00694, we propose the following schedule for the project:

March 27, 1970 - Complete field surveys.
July 31, 1970 - Complete plans & specifications.
August 31, 1970 - Complete review by State and Federal Agencies.
September 15, 1970 - Complete revisions in plans and specifications. Advertise for Bids.
October 15, 1970 - Take Bids.
November 1, 1970 - Award Contract.
December 1, 1970 - Start Construction.
September 1, 1971 - Construction Complete.

The foregoing schedule is tentative. Every effort will be made to better it if possible.

Very truly yours,

ROBERT AND COMPANY ASSOCIATES

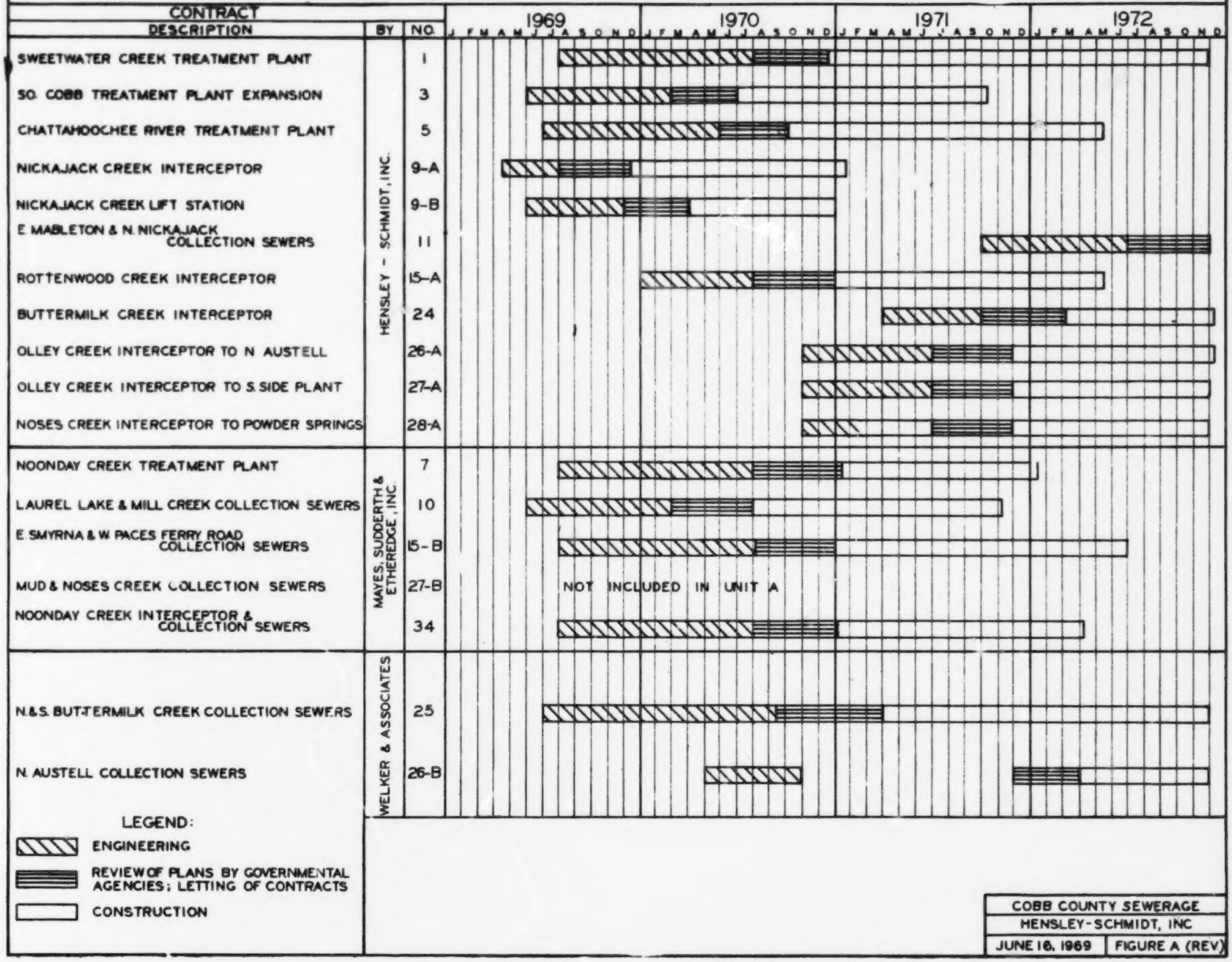
J. H. Bauer
Municipal Department

JHB/mmf

cc: Dr. David Wetherby, Mayor
cc: Hon. Theodore T. Molnar, Atty.

ENGINEERING & CONSTRUCTION SCHEDULE

200-[illegible]-7



COBB COUNTY SEWERAGE
HENSLEY-SCHMIDT, INC
JUNE 16, 1969 FIGURE A (REV)

MR. THOMAN: Mr. Williams, when Turner McDonald from Fulton County testified, I didn't hear him give any sort of a schedule. Maybe I missed something.

MR. HOWARD: He didn't give a precise schedule on all of it.

MR. THOMAN: I didn't get any precision out of the thing. Just for the record, I want to make clear that maybe I didn't hear something or it wasn't given.

MR. W. E. WILLIAMS: May I come up?

MR. STEIN: Come right ahead.

STATEMENT OF
MR. W. E. WILLIAMS,
ASSOCIATE, WIEDEMAN & SINGLETON
1789 PEACHTREE STREET
ATLANTA, GEORGIA

MR. W. E. WILLIAMS: I am Bill Williams of Wiedeman & Singleton, consultants for Fulton County. I would just like to add to what Turner McDonald said. He had to leave.

On the Camp Creek Plant that he mentioned, I believe he said the end of 1972 is the completion date for that. The Fulco Plant, which is to be abandoned, that waste will go into the Utoy Creek, and, of course, that will meet whatever schedule the city of Atlanta has.

On the two other plants, the Marsh Creek Plant, which we are going to expand in two stages, one will bring it from a three-quarter million gallon plant now to a 3 million gallon plant. I believe the target date on that is the end of 1971, and when this is completed we will then add another 3 million gallons to that. We don't have a firm date for that, but this won't really be needed for several years yet.

The Big Creek Plant is a 7/10 MGD plant, but we are only getting about 2/10 MGD through it. We recognize that there will be a tremendous increase in population in that area, but right now we can't put a hard and fast schedule on it because the Air Force keeps floating around and we don't know whether it is going to end up in that area or not, and it will make a tremendous difference, but they do recognize that we expect a tremendous increase in population. So they expect to stay ahead of that schedule, but we have no reason at the moment to have any hard and fast date for that.

MR. STEIN: Mr. Howard?

MR. HOWARD: I would like to ask him a question. This involves the river up above Atlanta.

Now, do you folks in Fulton County plan to provide a facility for the North River complex up there?

MR. W. E. WILLIAMS: No.

MR. HOWARD: Who is doing that? If they would quit kidding around with these apartment complexes and get along with these rezoning systems, they would get along with their other work a lot faster.

How would a county happen to be involved in providing an apartment developer's waste treatment facility and not getting these other things done?

MR. CHARLES H. JONES: I don't know about that one.

MR. HOWARD: No, you couldn't answer that one.

MR. THOMAN: Mr. Williams, I tried to elicit some information from Mr. McDonald and I apparently did not ask the question properly.

In his statement, Mr. Wes Williams says that Fulton County has a rapidly expanding population in both the north and south areas of the county and sewerage needs, both existing and projected, are almost overwhelming.

What is being done to provide sewers for these areas that are presently unsewered? Do you have any information on that?

MR. WESLEY B. WILLIAMS: Let me say we have two engineers involved, and the other one is here.

MR. THOMAN: Would he come up?

MR. HOWARD: Come up, Mr. Jones.

MR. W. E. WILLIAMS: I am not speaking officially for Fulton County. I am just telling you what I know as the consultant.

We are currently engaged in making a financial study for Fulton County to see what means we can come up with to finance all of this sewerage work.

Just a couple of days ago we had a meeting and we came up with some $35 million worth of work to be done within the next five years, which is considered to be not exactly emergency type work -- some of it is -- but the rest is something that they recognize has to be done right away. This $35 million or so worth of work will cover all of the presently populated areas.

In the south end of the county there are areas where large populations have been projected, but as of this date this is just open land. It is farm land and there is no development there at all.

And so, until something begins to happen, then they will put their money in these places where the needs already exist and get into these others as the development comes about.

This is in the south end of the county.

MR. STEIN: Did you want to say something?

MR. JONES: I can add a little bit to he gray area about the plant.

MR. STEIN: Why don't you get up to the mike?

MR. JONES: Yes.

STATEMENT OF
MR. CHARLES H. JONES,
PARTNER OF JORDAN, JONES AND GOULDING
1655 TULLIE CIRCLE, N. E.
ATLANTA, GEORGIA

MR. JONES: I am Charles Jones. I am with Jordan, Jones and Goulding. We are consulting engineers also for Fulton County.

We are involved in an engineering study that is under way, which will be a combination report on the 90,000 acres that lie within Fulton County north of the Chattahoochee River.

This report is under way and it is to be completed in the summer of 1970 and will outline all of the facilities, the location and size of treatment plants, the projected growth in the population, the location and size of interceptors, and the financial feasibility, and even a suggested timetable of construction if we can project the population increase.

As Bill pointed out, this will involve the Big

Creek Treatment Plant that is now only a 750,000 gallon a day plant and will be expanded, nobody really knows how big. The county owns 40 acres of land at the site of the Big Creek Plant, so we don't envision property to be a problem.

This recognizes the county's significance to the growth in the North Fulton County area, and they are on top of this problem.

South of the river we are also designing and have completed plans and specifications for two interceptor sewers, one of them being three miles long and the other one five miles long, to serve a portion of the area lying in North Fulton County, but south of the river, not in our study area.

This is one of the interceptor sewers that Rock referred to a minute ago, where an apartment developer has an interim facility, that he and, I must say the county, was not aware of.

MR. HOWARD: How come the county is doing the work?

MR. JONES: This is high level, and I can't tell you why the Commissioners do what they do.

MR. HOWARD: I can tell you what.

(Laughter.)

MR. JONES: But one of these sewers is about a million dollars and is planned for contract this year.

The 5-mile sewer, which will also serve a portion of DeKalb County, is about a million and a half, and it is programmed for construction in the next 18 months.

MR. HOWARD: What you just heard, Mr. Chairman, is a vicious cycle.

MR. STEIN: You're telling me.

MR. HOWARD: They are going to build apartments up there in a densely populated urban type of thing, and the watershed will get all fouled up, and they will have to move the water and take it way on up to Buford Dam.

MR. STEIN: What you are telling us is that the apartments are going up with interim treatment.

Now, as far as I can see, we have two problems, and this might be the other side of the coin that Mr. Howard alluded to when we started.

If we are not going to talk in terms of water resources, we also should not obscure the issue by talking in terms of the projected plans to go up and take care of population that doesn't exist.

According to Mr. Williams' statement, here we have three kinds of things with the municipalities.

By the way, as I understand the industry situation, Mr. Starling thinks they will all be completed by our deadline. The municipalities --

MR. HOWARD: I didn't say they could be. I said that they should be.

MR. STARLING: I think they will be.

MR. HOWARD: I think they will be.

MR. STEIN: But we sure don't have that kind of box score on the cities. Here's what we have, and I put them in three categories.

The first category is those that will be completed by July of 1971 or the end of June of 1971.

The second group are those communities which have indicated that they are going to meet the substantive requirements -- that is, secondary treatment plus disinfection -- but they have indicated that because of certain problems they are not going to be able to meet the deadline and may run a year and a half or two years late.

There is another group of communities where there have been no definite commitments made, and Mr. Williams indicates that if these definite commitments are made there is no reason why they can't meet the deadline.

Then there is Fulton County, where I don't see any commitment made, but I think with the studies and all the stuff going along, there is no chance that they are going to meet this deadline.

The question is -- you have not decided yet -- an airport may come in, you are putting up apartments, and you have a long interceptor, but this is not going to get us to the decision whether you are meeting that 1971 June deadline or not, and that is why we are here.

Are the wastes from Fulton County going to be adequately treated by June of 1971? That means collected, given secondary treatment and year-round disinfection.

MR. WESLEY WILLIAMS: Mr. Chairman, I might add that the Marsh Creek Plant and the Big Creek Plant are presently adequate, but with this kind of projected growth in the north end of the county it won't be too many years that they will be adequate, so we are planning in advance.

MR. STEIN: We recognize they are planning in advance, but again, let's keep our eye on the ball for what Mr. Howard indicated.

Our conference here and any program has to go along with a remedial program to deal with the problem as we saw it. We know from past experience that when you have these slippages and you are not meeting the date, this notion that you are catching up in the future with projected plans means you are always behind.

We came here in 1966. We came up with a plan that was supposed to be completed by the middle of 1971. The thing that we are going to direct ourselves to at this conference and

I hope at the executive session is how many of these people are going to meet this 1971 deadline and how many are not going to meet the 1971 deadline, and for those where we haven't got a commitment, whether we are going to give them any extra time to give the State that commitment, and if they don't give them that commitment within that specified period of time, what we are going to do in the future.

I can assure you that we are going to move on this. These are interstate cases, and without drawing any analogies, you people have probably read the papers where the Federal Government has given a lot of people 180-day notices, and if there is no compliance in 180 days then we go to Federal Court on the issue.

What you have to recognize is from 1966 to 1970 is a pretty long time. It seems to me in any case where the State of Georgia does not have a positive assurance that there is going to be compliance, I think these are the cases we have trouble with.

I don't want to single anything out. I am just using this as an example, and I hope it will be treated as such; but if you take the kind of letter that Georgia got from Columbus, Georgia, I don't see anything there which is going to indicate that that community is going to provide secondary treatment for all its wastes.

I do not see, and I join Mr. Thoman, in the statements made from Fulton County that all of Fulton County's wastes are going to be collected and adequately treated by June of 1971 either.

If I am wrong on that, I would like to hear it.

MR. HOWARD: Let me clarify a question here.

Fulton County, in the north end, upstream, is now providing adequate treatment where they have sewerage facilities. What bugs me is that they don't give the proper priority to cleaning up things like the Fulco and Camp Creek Treatment Plants.

As they said this morning, they are going to get those completed by the end of 1972. If they didn't get too involved with some of these developers of apartments and all and get into a real stew about interim facilities up there, why, they could do a lot more in their regular program.

That is what bothers me, but right now they are providing adequate treatment upstream.

MR. W. E. WILLIAMS: As I understand this meeting, the only thing germane to this meeting is Camp Creek and Fulco as far as Fulton County is concerned. Is that right?

MR. STEIN: No. Let's look at this.

MR. HOWARD: We go as far as Buford Dam.

MR. W. E. WILLIAMS: I mean as far as Fulton County is concerned.

MR. STEIN: Let's look at this, and I am not making any judgment on this now. Let me pose the question to you.

We have heard from the city of Atlanta. They have had certain slippage and they have indicated the reasons for slippage —the financial and technical reasons for slippage. I think the conferees are going to have to consider that and consider the equities of the case.

Now, there are certain areas in those two places in Fulton County, two problems, where presumably there is going to be slippage too until the end of 1972.

MR. WESLEY B. WILLIAMS: Right.

MR. STEIN: If the reason for that slippage is that you have been fooling with apartment house development, or you have been devoting your activities to other things without giving this the priority, I think this bears upon the kind of judgment that the conferees are going to exercise, the kind of judgment we are going to have to exercise, or what we are going to do about that slippage and where we move from here.

I think Mr. Howard is going to the heart of the matter. This is a very important issue.

If this could have been cleaned up in accordance with the program that the State set forth in 1966 and you were diverted to other problems, I think we have to really consider that to see if that lapse is reasonable or not.

Are there any other comments?

MR. JONES: I would just like to say that my statement that we were preparing an engineering report for 90,000 acres, which is a substantial portion of Fulton County, is in an area that is not presently sewered. The treatment plant they have is using only about a third of its capacity, so I don't think we are slipping or behind the plan or program.

The 5 miles of interceptor that we are doing is going into the plant that is not overloaded, and the 3-mile interceptor we are designing is going into the Marsh Creek Plant, that also is being expanded at this time, so I think we are talking about two slightly different problems.

MR. STEIN: I hope you won't be sensitive about this. Only the guilty flee where no man pursueth.

We are not suggesting that your firm has got a problem. What I think Mr. Howard suggests is that the county as a whole may have a problem in dealing with this.

MR. HOWARD: They've got it all right.

MR. JONES: I am going to stand up for Fulton County here.

I think they do have the foresight to know that the population explosion is about to occur in North Fulton County and they are trying to make adequate planning before the fact, rather than after the fact, so they can set their house in order and make some major changes in their rate structure and some other things, as he pointed out, that they are studying.

Possibly they are slightly behind what we would like for them to be, but they are certainly aware of the problem and are making great strides, and I want the conferees to be aware of this.

MR. HOWARD: What you said is true, but you didn't talk soon enough to realize that.

We clarified that thing upstream from Atlanta. There isn't any problem there, except this business of playing footsie with some of these developments and getting involved in apartment complexes and rezoning in a place where you have a sewerage system designed for a few single-family dwellings, and you turn around and rezone it against the wishes of the people with overloaded manholes and sewers and everything else.

MR. THOMAN: Rock, may I zero in on one thing?

Who has responsibility for these 50 small sewage treatment plants that Leonard mentioned which are in Fulton County? Who has responsibility for these?

MR. HOWARD: He mentioned Cobb County too, Cobb County and Fulton County.

MR. THOMAN: If there are 50 then, who has responsibility for operating them? Is that the county's, individual developers, or what?

MR. HOWARD: Fulton County doesn't operate many of the ones he mentioned.

MR. THOMAN: But who has responsibility for them?

MR. WESLEY B. WILLIAMS: May I answer that?

MR. THOMAN: Yes.

MR. WESLEY B. WILLIAMS: At the original conference, we stopped at the Marsh Creek Plant, and the reason we brought that in was because the city of Atlanta operated this, and I believe it was mentioned in the proceedings already in the last report.

Above we have a number of plants presently operated by Cobb County. Most of these programs are being eliminated with Cobb County's sewerage improvement program.

We have a policy of only allowing so many interim plants until we get a plan for orderly development of these communities, get on the sub-sewer system to the plant that will give the right treatment and can be properly operated with a full-time staff. Others are in smaller towns.

In the North Fulton County area, for example, there are several up there where private owners operate them. In North Fulton County we have a couple of subdivision types that they operate that are interim. There are a number around Roswell.

Incidentally, in North Fulton County, part of the county's program will take care of Roswell and others where they have existing health problems with such private facilities as septic tanks.

Most of these are operated by the county. There are a number of them that are poperated by private owners.

MR. STEIN: Are there any further comments or questions?

(No response.)

MR. STEIN: I don't think you have too many cities. But, I wonder, Mr. Williams, if for the executive session we could have a breakdown of the ones you feel are in compliance -- and we can go through that; the ones for which you feel you have a commitment, with slippage dates; and the third is the group for which you have no firm commitments. Right now that third group is certainly the one we are going to consider in the executive session and what we are going to do about them.

MR. WESLEY B. WILLIAMS: I will be glad to.

Some of these that I enumerated in the discussion are in more detail.

MR. STEIN: Thank you very much.

Do you have anyone else, Mr. Howard?

MR. HOWARD: That's all.

MR. STEIN: All right. We will call on Alabama now.

Mr. Beck.

MR. BECK: Mr. Chairman, I would like to introduce two of our staff members, Mr. J. L. Crockett, Director of the Water Improvement Commission, and Mr. J. M. Bolton, the Assistant Director of the Alabama Water Improvement Commission.

I am going to ask Mr. Crockett if he will give the statement on the status of the problems that relate to the Chattahoochee on the Alabama side.

Mr. Crockett.

STATEMENT OF
MR. J. L. CROCKETT,
DIRECTOR, TECHNICAL STAFF
ALABAMA WATER IMPROVEMENT COMMISSION
STATE OFFICE BUILDING
MONTGOMERY, ALABAMA

MR. CROCKETT: Mr. Chairman, Conferees:

I am J. L. Crockett, Director, Technical Staff, Alabama Water Improvement Commission.

1. Enfala and Phenix City.

As reported by the Water Improvement Commission during the first session of the conference on interstate pollution of the Chattahoochee River held July 14-15, 1966, the cities of Eufaula and Phenix City are providing secondary treatment of wastes discharged to the Chattahoochee River. Phenix City accomplishes treatment through the trickling filter method followed by chlorination while Eufaula treats its waste in a stabilization lagoon. The facilities of both of these cities are considered to be adequate.

2. Lanett

The City of Lanett has agreed to enter into a joint municipal-industrial waste treatment project involving the city of West Point, Georgia, and the Lanett Mill of West Point Pepperell, Inc. West Point Pepperell proposed to undertake the planning and construction of this joint project and, following the first session of this conference, submitted a schedule under which the project would be completed by January 1, 1970. On September 5, 1968, a revised schedule was submitted by West Point Pepperell without changing the date of January 1, 1970, for completion of the project. On September 15, 1969, West Point Pepperell advised the Commission that progress on its joint project with the cities of Lanett and West Point, Georgia, had been delayed because of the delay in Federal aid to West Point, Georgia, and a possibility of Federal aid on the entire project. According to West Point Pepperell, the possibility of relocation of U. S. Highway 29 which would affect the location of the joint treatment project has also contributed to the delay.

3. Fairfax, Langdale, Riverview and Shawmut

West Point Pepperell owns and operates the domestic sewerage systems serving these unincorporated communities. The company proposed to treat sanitary wastes from these communities jointly with industrial waste from its mills within these communities. Following the first session of this conference, West Point Pepperell submitted a schedule calling for the completion of a joint industrial-sanitary wastes project by June 1, 1969. A revised schedule submitted by West Point Pepperell September 5, 1968, did not alter this completion date. As of this date, the project has not been placed under construction and the Water Improvement Commission was advised on September 15, 1969, that plans which are essentially complete have been held in abeyance in the hope that Federal or State aid would be available for assisting in financing the project or some governmental agency might accept responsibility for treating sanitary waste from the unincorporated communities of Fairfax, Langdale, Riverview and Shawmut.

4. LaFayette

The city of LaFayette discharges approximately 0.08 mgd and 0.09 mgd of untreated sewage to Allen and Kellem Hill Creeks, respectively, at points approximately 16 miles from the Chattahoochee River. The city is preparing an application for financial assistance under the Federal Water Pollution Control Act for the construction of secondary treatment facilities.

5. Hurtsboro

The town of Hurtsboro discharges approximately 0.07 mgd of untreated sewage to Hurtsboro Creek approximately 25 miles from the Chattahoochee River. Plans have been completed for secondary treatment facilities and the town is seeking Federal financial assistance in the construction of its project.

6. Roanoke

At the first session of this conference we included the city of Roanoke as a contributor of untreated waste to the Chattahoochee River Basin. This city has since completed a new secondary waste treatment system under which the discharge of sewage to the Chattahoochee River Basin has been removed.

7. Blessed Trinity Retreat and Eufaula Air Force Station

These sources of sanitary wastes provide secondary treatment determined by the Water Improvement Commission to be adequate.

B. INDUSTRIAL WASTES

1. West Point Pepperell, Inc.

The status of industrial waste treatment by West Point Pepperell, Inc., for its mills on the Chattahoochee River is discussed under the discussions of communities in which this company's mills are located.

2. Alabama Kraft Company

Since the first session of this conference, Alabama Kraft Company has completed a secondary waste treatment system consisting of solids removal, a 52-acre aerated lagoon, a 98-acre stabilization lagoon and a 101-acre holding pond from which treated wastes are discharged to the Chattahoochee River through a submerged multiport diffuser. This waste treatment system was oversized to permit future expansion of the mill which as yet has not been undertaken. Reports of routine monitoring of the waste treatment system submitted to the Water Improvement Commission by the company indicate removal of 87 percent or more of applied BOD.

Prior to coming here today and upon receipt of the notice of this conference, West Point Pepperell was notified and invited to attend. So was the city of Lanett.

Unfortunately, neither the city of Lanett nor West Point Pepperell have seen fit to have representatives here today.

MR. STEIN: Thank you, Mr. Crockett.

Are there any comments or questions?

MR. HOWARD: I have one.

First of all, Joe, Alabama Kraft wasn't cited at the conference in 1966, or was it?

MR. CROCKETT: No, it was not. We reported on Alabama Kraft. At that time we reported that they were under construction, and this is simply to bring it up to date on what they did construct and something of the performance of the unit.

MR. HOWARD: Mr. Chairman, I would like to refer you to a resolution that was presented by Mr. Granberry back in 1966, by the Alabama Textile Manufacturers Association, in a laudatory statement at Page 154 of the proceedings, and then a long resolution of the Georgia Textile Manufacturers Association, the last sentence on Page 170 reading:

> "West Point Pepperell is dedicated to clean water. They are doing something about it."

Now, they have defaulted in all the promises of these resolutions and everything else, and they are one outfit that we ought to get some real strong information from as to what they intend to do, because they are really spinning the wheels.

MR. STEIN: I assure you it will be taken up at the executive session.

MR. HOWARD: If we had time, I would like to read the resolution to all the people here, but we haven't got the time.

MR. STEIN: Well, sometimes those statements of dedication have a long term of gestation.

(Laughter.)

Are there any other comments or questions?

(No response.)

MR. STEIN: If not, thank you for a very concise and excellent report, Mr. Crockett.

I think this gives us a very clear picture of what the situation is from the Alabama sources.

Mr. Beck?

MR. BECK: We have no indication that anyone else from Alabama wishes to speak to the subject of pollution from the Alabama side.

Are there any in the audience that would like to speak to this problem?

(No response.)

MR. BECK: Hearing none, Mr. Chairman, I turn this back over to you.

MR. STEIN: All right.

We are now going to close the public session of the conference. I think we have gotten a pretty good picture of what was said.

Does anyone else want to say anything before I do this?

(No response.)

MR. STEIN: Under our procedures, there won't be a further opportunity. The conferees will go into executive session, and then we will make an announcement.

Hearing none, I think we have had, at least to my mind, a pretty clear picture of what is happening. I hope it has been as clear to you.

I recognize that the people on the panel are pretty much professional and have put all their working life into this, so we can understand it; but I do think that the conferees will have some rather serious questions to consider in the executive session.

Looking at the time, and with lunch, I think we should be able to have an announcement about 4:30 or 5 o'clock.

Does that seem like a reasonable time schedule to you people?

MR. BECK: Yes.

MR. HOWARD: Yes.

MR. STEIN: All right. We will recess and we will be back in this room then at 4:30 or 5 o'clock with an announcement.

(Whereupon, at 12:50 p.m., the conference recessed until 4:30 p.m., and the following ensued:)

Closing Statement - Mr. Stein

MR. STEIN: Let's reconvene.

I am happy to announce that the conferees have come to unanimous conslusions and recommendations. These follow:

1. Within 30 days after notification by the Federal Water Pollution Control Administration or the appropriate State water pollution control agency to the municipalities and industries concerned, such municipalities and industries shall notify their appropriate State water pollution control agency giving assurances that they will meet the requirements of the conference and indicating the date such requirements will be met.

It is understood that this means that all municipalities and others discharging domestic waste provide a minimum of secondary treatment with adequate disinfection of the effluent, where appropriate. Industries shall install comparable remedial facilities for industrial waste discharges. All necessary remedial facilities to cover pollution of that portion of the Chattahoochee River covered by this conference shall be completed and in operation on or before July 1, 1971.

2. As soon as possible after this 30-day date has expired, representatives of the State water pollution control agencies of Alabama and Georgia and the U. S. Department of the Interior shall meet to determine acceptability of compliance and, where appropriate, recommend further action be taken to assure

abatement of pollution.

That is the end of the conclusions.

Are there any comments from the conferees?

(No response.)

MR, STEIN: If not, the conferees will be available for individual questions after this.

I would like to thank you all for coming and staying with us.

Let me state this, and I am just speaking for myself: We recognize that we have a very critical situation here. We recognize that while many of the communities have made a bona fide effort to comply with the 1966 recommendations, there have been several notable severe lapses. We are giving these parties one month. You will be getting a letter, all of you, from either the Federal Water Pollution Control Administration or the State, very, very shortly. You have 30 days from that letter to notify the State of an assurance that you are going to comply, plus the date of compliance.

After we meet with the States, if it is satisfactory we will be happy to indicate that and go along with it, and you will hear from the State agency. If it is not satisfactory, I want to assure you that we all intend to follow this through to its conclusion and take appropriate action.

Closing Statement - Mr. Stein

I think you have all helped quite a bit.

If there is nothing more, this conference stands adjourned.

(Whereupon, at 4:35 p.m., the conference was adjourned.)

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